

Four Ways 5G Could Improve Your Business Today

WHITE PAPER

Excitement around 5G is growing as next-generation networks take shape. Unlike other major generational changes, 5G promises to deliver a variety of new capabilities that could fundamentally change business. The future is promising.

And not just the future. The benefits that 5G could provide right now are often overlooked. The hype surrounding future use cases can overshadow the benefits that 5G is already capable of bringing. While these enhancements to current broadband capabilities are perceived as less fundamentally disruptive, they could enable organizations to begin taking advantage of 5G now, helping their businesses build a better network foundation that can deliver improvements across a wide range of tasks.

The cumulative benefits that 5G offers today could make a noticeable difference for workforces and enhance the employee experience—goals that businesses are increasingly recognizing as key to competitive advantage. The most obvious is that a visible upgrade in wireless bandwidth and speed can increase worker productivity. Workers want to be able to depend on a network that delivers fast connections. Every second spent working instead of waiting for network responses increases their output.

5G networks could also better support the use of demanding applications, such as video and analytics, and the use of larger files and databases, because they can be transferred faster than with 4G networks. If there is anything with the potential to frustrate workers more than the need to hunt for a signal, it's long delays in getting the information they need to do their job.

Four key capabilities that 5G provides today that benefit every business

While 5G is just taking root, it is already providing tangible and noteworthy benefits via new functionality and capabilities that are available today. These 5G-driven enhancements can potentially resolve technical issues that result in a suboptimal experience for some users, delivering more productivity and efficiency to businesses overall. For organizations that make the decision to begin using 5G today, four important areas will see significant improvement:

1. Coverage: As virtual work becomes “how work gets done” and the use of digital systems by highly mobile and geographically diverse workers dramatically increases, broad 5G coverage will bring more bandwidth to these users, particularly those in less populated areas where performance has lagged. A good example of geographically dispersed apps is a customer-facing system that must be used on site by field sales or customer service workers. For remote and virtual work, coverage that supports 5G devices will be important for areas where consumer broadband links might be overloaded or inadequate. Today, 5G coverage delivered on low-band spectrum leverages the existing 4G network to provide the modest bump in performance needed to improve video collaboration and other commonly used applications.

In addition, some 4G LTE networks don't have sufficient capacity in major metropolitan areas, where demand is high. And the reliability of high-speed connections is often lacking. T-Mobile's 5G delivered over mid-band 2.5 GHz and low-band 600 MHz spectrum dedicated to 5G will solve these problems as it is built out across the country.

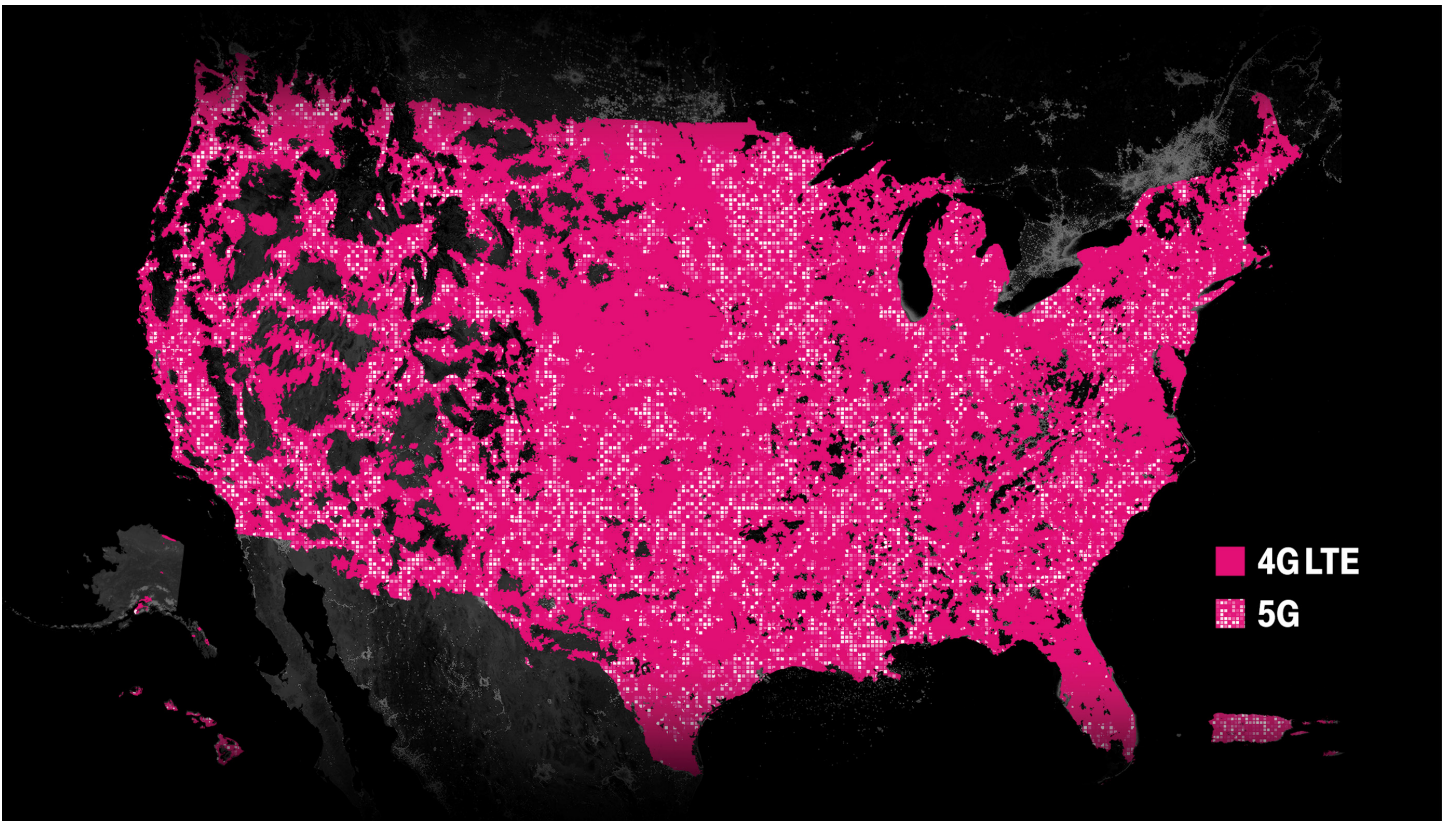
2. In-building performance: As many of us have experienced, signal strength and availability in certain buildings can be subpar. You may have heard that much of mmWave (millimeter wave) 5G won't go through glass, so walking into a building can dramatically impact your connection. Workers may find that their signal is lost when they move about the building, so the mobile work experience is possible only in certain spots. Even away from work, employees can experience in-building performance problems if they live in an apartment complex or visit clients who work in large structures. Without consistent in-building connectivity, the value of the mobile network is



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dramatically lower. To solve this problem, carriers need to provide 5G coverage in lower bands. Low-frequency 5G doesn't have the same limitation, providing better reliability via increased coverage.

3. Bandwidth: With 5G, bandwidth can be much greater than that of 4G in many areas so more data can be pushed to the device, information can be transferred faster, and time lost waiting for the network can be minimized. The potential productivity gains can be quite compelling. If a worker must wait just 10 minutes a day for file exchanges to finish, that adds up to an entire workweek of efficiency lost every year. And because 5G protocols include the ability to balance upload and download speeds, data can flow both ways much more quickly. Increased bandwidth also improves the viability of video collaboration; as



things are now, some workers don't even try using video collaboration on their smartphones. And for organizations deploying virtual desktop infrastructure (VDI), increased bandwidth means employees can seamlessly switch between devices when using their virtual workspace.

Increased bandwidth is essential to enable the broad use of digital platforms, which are central to an organization's digital transformation. Analytics is fast becoming key to evaluating business results, but it requires a high-speed network and expansive bandwidth to support the movement of large files and dense dashboards. Digital transformation also can rely heavily on artificial intelligence, another technology that can demand high-speed interconnections. And the emerging generation of interactive virtual and augmented reality apps will also work far better on future advancements of 5G. Those sorts of apps were once the provenance of only the most technologically sophisticated organizations, but now, they are starting to be democratized—for example, even small real estate offices can now offer virtual tours of properties. With 5G, potentially more of these businesses will be able to offer such capabilities.

- 4. Access to mid-band 5G:** Low-band 5G provides a more reliable signal through broader coverage than higher band networks, and there is more low-band spectrum to be deployed. Mid-band spectrum will deliver a step-function improvement in speed and bandwidth, which is a game changer. However, not every carrier will have mid-band capability soon. Fast access to mid-band is important, since it will help future-proof investments in devices and apps that are available today. T-Mobile has already lit up 2.5 GHz mid-band in Philadelphia and New York and will have other mid-band points of presence over the next 18 to 24 months. Some other carriers may not have sufficient mid-band spectrum to dedicate to 5G deployment in that time frame.

The T-Mobile advantage

T-Mobile has made substantial investments in the network and is actively deploying optimized 5G capabilities for businesses of all sizes. It starts with the broadest 600 MHz 5G coverage available today, making 5G speeds and bandwidth possible for workers and their systems across the country. No 5G signal is more reliable, which means greater assurance that 5G benefits will be there as workers need them. Beyond that, T-Mobile possesses spectrum in

all three 5G ranges, ensuring that it can provide low-band, mid-band and high-band (mmWave) as soon as possible in many areas across the country. It is an advantage to already own substantial spectrum in all three bands.

T-Mobile is already starting to deliver mid-band (2.5 GHz), well ahead of other carriers. Even organizations that don't need mid-band immediately can be reassured that the additional functionality and increased speed provided by mid-band promises to be available when needed.

Key takeaways

5G has long seemed to be a future technology—always promised but never arriving. That is changing. 5G has already begun to provide real advantages, real benefits, and real improvements. Organizations are now leveraging the coverage and speed of T-Mobile's 5G to improve employee experiences, enhance productivity, and support new apps and services.

Employees are excited about faster speeds, which will save them time every day. They also appreciate being able to effectively use more applications and tools on their devices, more than what is possible with 4G. Organizations that begin using 5G now will have a leg up on those that wait. For more information on where your business can leverage T-Mobile's 5G network and services, please visit t-mobile.com/business/coverage.

5G: Capable device required; coverage not available in some areas. While 5G access won't require a certain plan or feature, some uses/services might. 5G uplink not yet available. 5G is still developing. Not all devices and signals are compatible and may not support 5G tethering; check device specs. See Coverage details, Terms and Conditions, and Open Internet information for network management details (like video optimization) at T-Mobile.com.