



The *5G* future of Financial Services

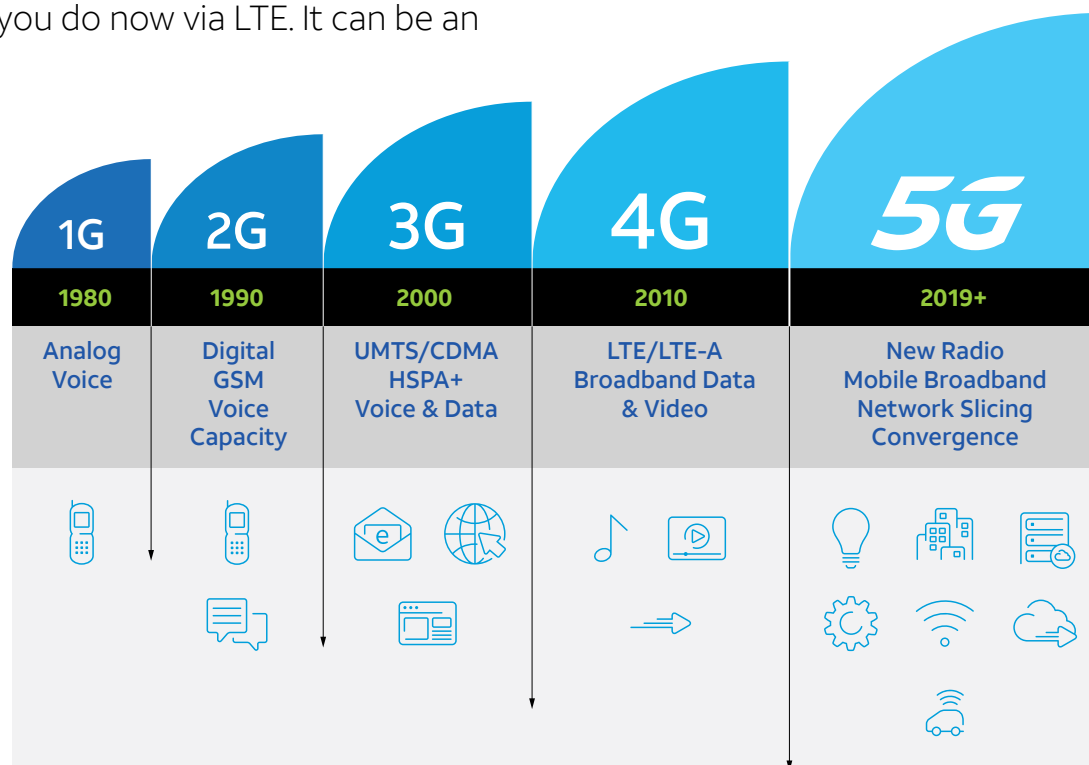
Retail Banking • Insurance •
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“5G is about more than speed.”

That statement is a popular one, and while true, follow-up details can seem scant, squishy, or science fiction – especially if you’re looking for a cut-to-the-chase rundown of coming FinServ use cases.

5G can be about more than speed, more than accelerating what you do now via LTE. It can be an

opportunity to rethink your strategy, culture, and infrastructure in a way that optimizes the most impactful technologies for your business and your bottom line. The pages that follow are a concise collection of promising possibilities for financial institutions.



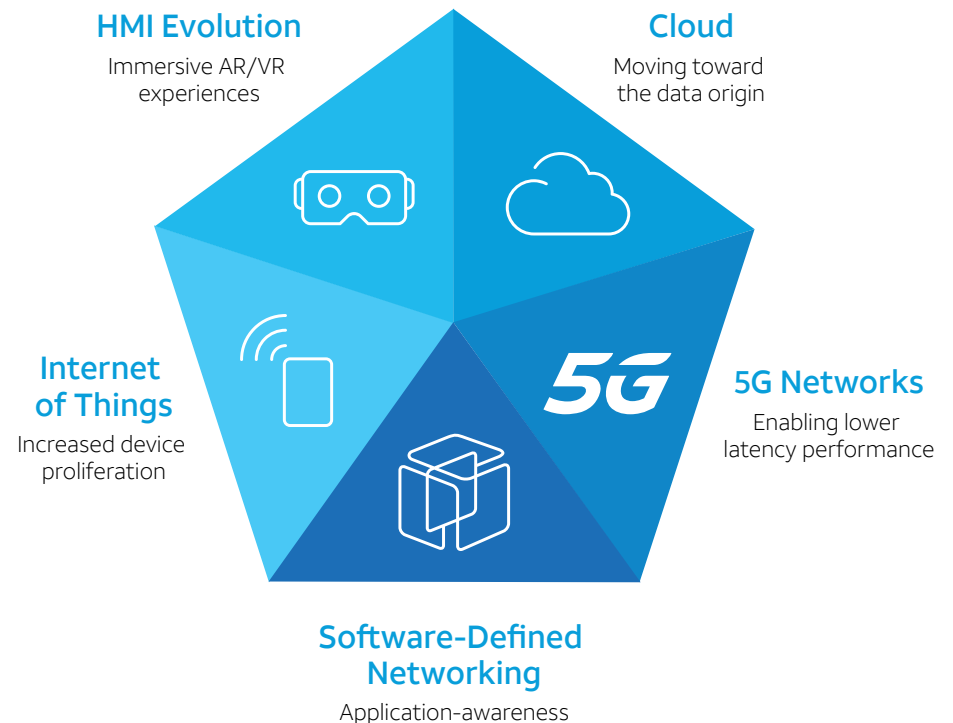
“5G is the gateway to an entirely new world for businesses, but it needs **multiple technologies coming together** to achieve its true potential.”

Jason Leigh, Senior Analyst, IDC

The true promise of 5G lies within its context—in concert with other digital transformation technologies coming of age. Massive IoT can be enabled. Already-impressive edge computing latency can be further reduced. It is likely to complement Wi-Fi, not replace it. And AR/VR devices can become truly untethered – featuring streamlined storage, processing, connectivity, even wireless power* to realize innovative wearables and other form factors previously thought impossible.

“Will 5G replace Wi-Fi?”

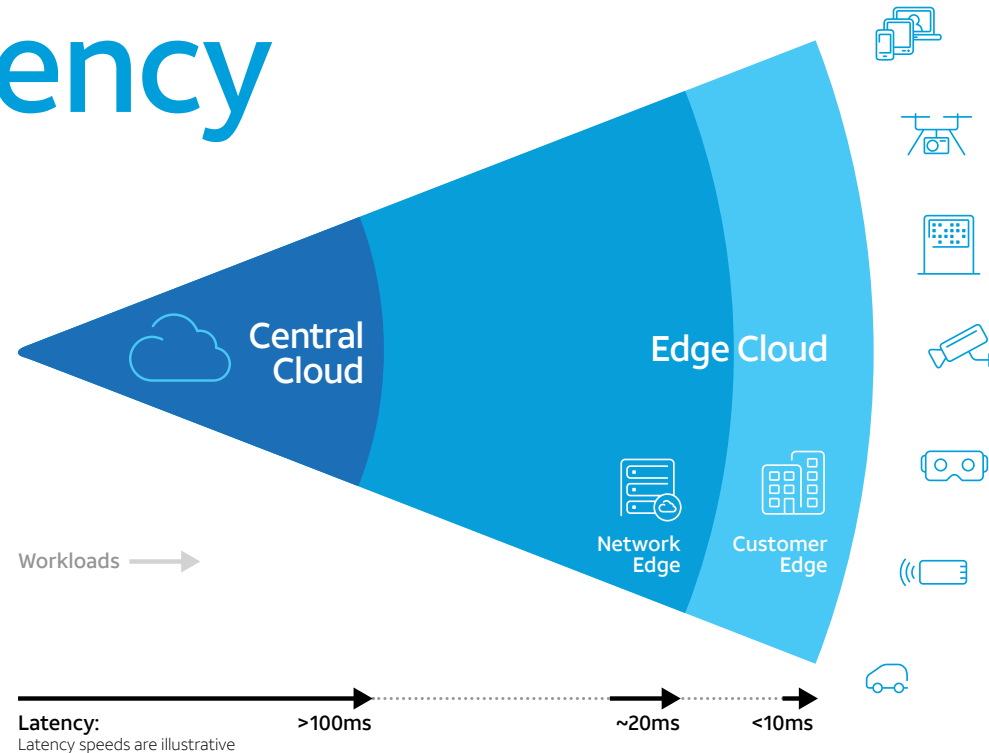
This question has resurfaced with the emergence of 5G and Wi-Fi 6. Many industry experts believe that Wi-Fi will coexist with, and can even be a key part of many 5G use cases. Learn more, including the potential for convergence into a single radio network backbone for campus, office, and business venues [here](#).



* Recent advances in wireless energy tech like ultrasound, induction, magnetic resonance, RF, beam forming, and infrared laser can enable sensors and other IoT devices to charge without a wired connection.

5G and edge computing for lower latency

Services that currently reside in a central cloud outside the mobile network can be pushed to the edge – the doorstep of the devices. This can improve end-to-end latency for the connection of mobile apps, cloud services, sensors, and other systems that can power big data analytics for enhanced customer experience and greater share of wallet.



75% enterprise data
processed at the edge by 2025

Gartner

8x mobile data traffic
growth by 2023

Accenture

“We carry around these devices and they’re bigger than they should be, because there’s a lot of computing in here, there’s a lot of storage in here. When you get to 5G... it’s back in the network. These form factors, some would say they shrink. I say they go away. It becomes a delivery without screens. **It’s just a totally different experience.**”

Randall Stephenson, Chairman and CEO, AT&T

Untethered AR/VR/ spatial computing



Complex ideas can benefit from multi-dimensional visualization, and many customers have come to expect it. 5G can enable customers to experience video-heavy, bandwidth-hungry, latency-sensitive devices like virtual reality (VR), augmented reality (AR), and spatial computing (Magic Leap) without feeling constrained by wires. Mobile apps could quickly load interactions with remote virtual tellers, financial advisors, and loan officers, in addition to high-definition charts and personalized offers. Instead of pixelated video and sluggish animations, customers could see visually-compelling stories about compound interest,

the highest-rated mutual funds, or the impact of impulse spending on their monthly budget.

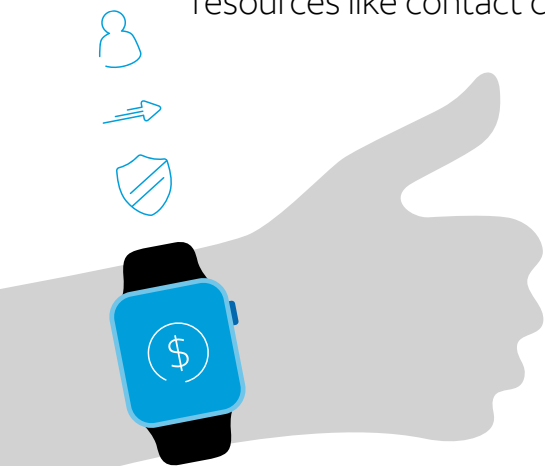
Stock traders could use untethered 5G devices to inform purchase decisions by visualizing investments, trades, and budgets in 3D, and tracking updates in near-real time. Marketing teams might visualize customer journeys in physical space with apps that map and simulate buy flows from first impression to sale. Internal training programs for compliance and new hires can be transformed into immersive, media-rich sessions, with instructions, diagrams, and animations overlaid onto real-world interactions.

\$14.2B is the estimated global market
for enterprise AR applications by 2022

Mobile/wearable payments

Payments from mobile devices and wearables may be enhanced by 5G for both the merchant and the consumer. Complex queries that streamline big-ticket purchases (like lending rates, credit checks, and available funds) could be run simultaneously. The benefits of accelerated payment authentication and proactive fraud detection could also be wins for routine point-of-sale transactions. The increase in speed and reduction in latency could allow margin for additional processes to be inserted that help reduce fraud detection errors. That in turn, could reduce the number of wrongly-declined transactions, freeing up company resources like contact center support.

Consumers could more confidently use their preferred method of payment, enjoying faster transactions and personalized services without fearing unnecessary payment locks. Mobile payments made by 5G-connected devices could be more securely authorized by what appears to be instant cross-reference of merchant ID, transaction amount, geolocation, biometrics, or even behavioral data like “typical customer gait.” Personal budgeting apps could also provide near-immediate feedback about a purchase and its budget implications by rapidly importing transaction data.



65% of U.S. consumers cite security fears for not using a smartwatch or other wearable to make a payment

Transaction Network Services

Pop-up/mobile branch

5G can enable FIs to extend their reach by providing a complete branch experience at temporary locations like music festivals, sporting events, college campuses, and disaster-affected areas. The speed and responsiveness of 5G could enable simultaneous wireless functionality of ATM and other self-service kiosks, employee telepresence, teller systems, Wi-Fi, video surveillance, as well as entertainment and digital signage for lounge areas.

AT&T Business recently worked with one of the world's largest banks to develop and deploy a mobile branch prototype powered by 5G fixed mmWave as well as 4G LTE. This trial has helped assess how to reduce costs and time-to-market for an improved, video-centric customer experience.

“Think of taking the physical branch to where the crowds are, featuring all the services that a brick-and-mortar store could”

Abhi Ingle

Senior Vice President, AT&T Business



Commercial fleet telematics/surveillance

Risk assessment of commercial fleets can be time consuming and difficult to score. 5G can enable ultra-HD (UHD) video to be used as a mobile workforce sensor and surveillance tool. Streaming simultaneous, high-bandwidth video feeds (video as a sensor) to AI algorithms or to managers back at headquarters could transform the way enterprises manage risk on the road. In addition to the potential for autonomous vehicles, IoT **usage-based insurance and fleet management** capabilities could be enhanced by 5G to better understand and manage mechanical maintenance (routine or unexpected), traffic conditions, weather, driving behavior, and route optimization.

5G-enabled data analysis can lower costs and more accurately score risk for insurance carriers.



IoT for claims and damage inspection



5G can enable remote control of commercial drones beyond line-of-sight to perform claims work, predictive risk analytics, and **safety operations**.

A drone capturing and delivering UHD video of rooftop damage from a recent hailstorm could also overlay government flood data on a mobile device to visualize which homes would be inundated if a nearby levee were to fail.

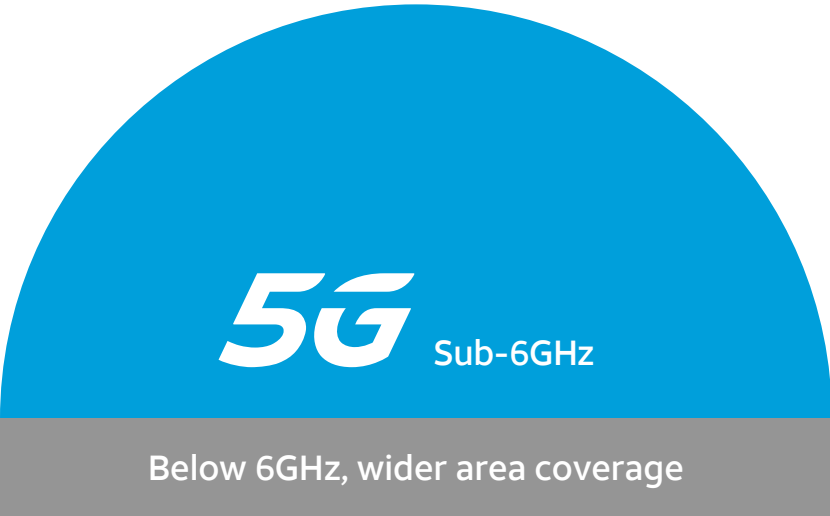
\$1.4B total addressable market for drones used for insurance claims

Goldman Sachs

Remote field appraisers could assess damage to a vehicle or home from a customer mobile device, pausing, capturing, and annotating UHD video for analysis and updates to HQ in near-real time. Customers could receive on-the-spot settlements more quickly and accurately.

Two flavors of 5G

5G New Radio (NR) is the global standard for the network interface. Though still evolving, it includes two distinct frequency ranges that enable different use cases for financial institutions.



The diagram for 5G Sub-6GHz features a large blue semi-circle. Inside the semi-circle, the text '5G Sub-6GHz' is displayed in white. Below the semi-circle is a grey rectangular box containing the text 'Below 6GHz, wider area coverage'.

5G Sub-6GHz

Below 6GHz, wider area coverage

With theoretical peak speeds of **400+ Megabits per second** (Mbps) and average speeds of **40+ Mbps** (4G LTE is 20 Mbps), low and mid-band spectrum below 6GHz can travel much farther than mmWave. This is the 5G frequency range that can enable broader coverage similar to existing U.S. 4G coverage.



The diagram for 5G+ mmWave features a smaller dark blue semi-circle. Inside the semi-circle, the text '5G+ mmWave' is displayed in white. Below the semi-circle is a black rectangular box containing the text '24 GHz and above, more limited coverage'.

5G+ mmWave

24 GHz and above, more limited coverage

With theoretical peak speeds of **2+ Gigabits per second** (Gbps) and average speeds of **400+ Mbps**, high-frequency millimeter waves can carry enormous bandwidth, but are challenged by physical barriers like walls, windows, and trees. mmWave 5G is most commonly considered for deployment in population-dense urban areas.

Preparing for *5G*

Look for challenges and opportunities in your organization that could be improved by data-driven insights, massive device connectivity, lower latency, better capacity, or ultra-high speed.

Identify the key players and departments that should participate in planning and implementation. Consider how collaboration between these entities can provide efficiencies and points of integration.

Connect with a trusted provider that has the experience to help you integrate, scale, and secure 5G business solutions. Consider 5G technology a part of your overall digital transformation strategy.





AT&T Business is a leading provider of **Edge-to-Edge solutions** for Financial Services, and the **largest SD-WAN provider** globally. Some of the most successful companies in the world integrate our unique ecosystem of highly secure network, technology, and expertise to obtain near-real-time intelligence from every corner of their enterprise.

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