Today's technology news is dominated by articles about the promise of 5G, and with 5G set to roll out even more broadly in 2020, the impact that it will have on the P&C and collision repair industries will be significant. 5G, so named because it's the generation following today's 4G, could bring mobile phones information 600 times faster than today's speeds. Further, 5G will enable connections of up to 1 million devices per square kilometer. That is significantly more than the 2,000 to 10,000 devices per square kilometer that 4G provides.

> A massive increase in connected devices will bring about important innovations in the Property & Casualty and collision repair industries.

The capacity for a massive increase in connected devices that respond seemingly instantly will bring about important innovations in a range of sectors, including the Property & Casualty and collision repair industries. As Kent Finley wrote in WIRED, "There's more to 5G than just speed; 5G technologies should also be able to serve a great many devices nearly in real-time. That will be crucial as the number of internet connected cars, environmental sensors, thermostats, and other gadgets accelerates in coming years." It's these and other connected devices that have the greatest implications for these industries.

5G and Connected Cars

5G has the potential to be a game-changer in terms of how connected cars interact both with other vehicles and with the environment around them. In the future, 5G will enable faster, more reliable connections with cellular networks as well as "vehicle to anything (V2X)" communications—with the anything being "car-to-car and car-to-infrastructure" linkages, as Digital Trends' Jeff Zurschmeide explains.

As he put it, “Cellular and other V2X communications … (will be) critical for autonomous driving, but they can also improve your driving experience while you’re still behind the wheel. For example, systems have been tested in which vehicles are allowed access to traffic light signal information,” helping drivers, both humans soon and autonomous vehicles later, work in concert with signal timing, improving traffic flow.

5G connectivity will be essential for innovation in vehicles to make the next big leap forward, including managing the charging of electric vehicles and making autonomous ones acceptable and then routine.

The Impact of 5G on Auto Physical Damage Insurers and Collision Repair Facilities

5G has significant implications for the entire auto physical damage ecosystem. As the number of sensors in vehicles increases, the data they produce may collect details of collision damage, which in aggregate can help manufacturers improve vehicle designs, carriers price coverage appropriately and collision repair facilities accomplish proper and safe repairs.

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Further, the ability for vehicles to communicate with each other and the environment via 5G may signal greater safety on the road. For instance, with embedded sensors, vehicles could crowd source information about weather, road conditions and hazards, and share it with other vehicles in real time. But increased vehicle complexity may also signal increased repair complexity. As Mitchell’s Jack Rozint explains, as advanced driver assistance systems become more prevalent, repair facilities “must be prepared to fix, and heed the advice of, a computer network on wheels.” This is a pattern that is likely to escalate as 5G drives the adoption of increasingly sophisticated onboard computers.

5G in Healthcare: Reverberations Across the Property & Casualty Industry

5G is expected to bring significant changes to healthcare that will reverberate across the Property & Casualty industry. Among the most important opportunities will be Internet of Medical Things (IOMT) devices that allow for sophisticated remote monitoring of patients. Today’s consumer wearables and even IOMT devices like heart and diabetes monitors already provide medical care providers with information and insights that they previously would not have had access to. 5G networks will have greater stability and lower latency and be much less of a drain on battery life, so they will be able to support more critical health care monitoring and functions. And with the data these sensor-enabled devices produce, health care providers can deliver more personalized care.

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> functions.

In fact, 5G networks will be so fast and so stable that one company, Ericcson, believes they will be able to support functions that could mean the difference between life and death like remote robotic surgery performed by a physician working on a patient via a super-precise robot. In the not-too-distant future, the surgeon could be performing a remote surgery as close as in the same building as the patient or as far as in another continent due to the speed of 5G in IOMT.

When Will 5G Get Here?

While wireless carriers are rolling out early iterations of 5G networks worldwide, it may be several more years before the systems are in that will make V2X and remote robotic surgery a broadly shared reality.

Based on the expected advances 5G will foster and the current speed of innovation, I envision the way we live today will someday seem quaint, with today's phones, cars and medical equipment appearing to our future selves as antiquated as a rotary phone. Maybe not tomorrow, but possibly faster than we might expect.