5G TECHNOLOGY

Prepared by the Greater Killeen Chamber of Commerce & 14 Forward Foundation

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5G stands for 5th generation mobile network. It is a global wireless standard.

- 1G = First Generation delivered analog voice in the 1980s.
- 2G = Second Generation introduced digital voice in the early 1990s.
- 3G = Third Generation provided mobile data in the early 2000s.
- 4G= Fourth Generation LTE is the era of mobile interface in 2010s.

5G wireless technology is meant to deliver higher multi-Gigabytes per second data speeds. For example, you can download a movie 500% faster than with 4G.

5G has more capacity. It delivers multiple broadband experiences but supports new services. It offers 100X increase in traffic capacity and network efficiency.

5G delivers more instantaneous, real-time access (latency) – a 10X decrease in delay.

To date, 5G has been deployed in over 35 countries including the U.S.

5G will impact individuals by increasing their ability to consume data from 2.3 Gigabytes per month using 2G to 11 Gigabytes per month using 5G on their smart phones in 2022. This will provide enhanced video and always-connected cloud computing, among other things.

5G will impact business by giving them faster access to more information and increasing networking capabilities. For example, smart factories could use 5G to increase operational productivity and precision.

5G will impact cities by providing greater connectivity between people and things to improve remote control of infrastructure such as traffic control and utilities.

5G will require a new smart phone.

Two concerns have been voiced.

- The first is a health concern about emitted radiation. Many devices emit radiation in our world today including radio waves, microwaves, x-rays, lights on monitors and cell phones. The sun emits radiation. In fact, the sun produces more electromagnetic radiation than 5G cell towers. The Federal Drug Administration has found, “The weight of scientific evidence has not linked cell phones with any health problems”.
- The second are ongoing security concerns. 5G enables a huge number of connected devices, collectively known as the Internet of Things (IoT). These devices can be a target through which cyber threat actors can attack. And, one of the three major 5G equipment manufacturers is the Chinese company Huawei. Many believe using Huawei equipment in 5G network could leave countries at risk of being spied on by the Chinese state. Nokia and Ericsson are the non-Chinese equipment manufacturers.