

## Reading 2

Skills:

- Details
- Scanning

**Getting started:** What are some facts you know regarding 5G technology?

Read the infographic below. Then, complete the following chart with the essential information the infographic presents:

Device consumption	
Use	
Lag (slow response)	
Value	
Uses of other Gs (previous generations)	
5G speed	

# 6 Things to Know about 5G

## 1 A G-Whiz Technology

5G stands for **fifth generation wireless** technology. It follows 1-4G, but 5G comes with a twist. 1G and 2G were based on delivering voice service; 3G brought us mobile data; and 4G the mobile internet; yet **5G will fundamentally transform the role that mobile technology plays in society.**



**1G & 2G**  
delivering voice service



**3G**  
mobile data



**4G**  
mobile internet

**5G**  
transforming mobile technology in society



## 2 5G Is Freaky Fast

5G will **increase download speeds** up to 20 Gb per second compared to 4G's one Gb per second. That means **a full HD movie can be downloaded in a matter of seconds** versus an hour to download a HD movie in 4G.<sup>1</sup>

**4G**



1Gb per sec

**5G**



20 Gb per sec

## 5 Transformational Technology

Today, **mobile telecom technology isn't classified as a "general purpose technology."** GPTs like electricity, the internet, and the internal combustion engine drastically transformed both daily life and the ways business is conducted. 5G can potentially launch mobile communications into that exclusive realm, as it paves the way for massive innovation and gives rise to new industries that benefit entire economies. **5G will ultimately advance mobile from a set of technologies connecting people to people and information to a unified fabric connecting people and machines to just about everything.**<sup>4</sup>



## 3 More than Speed, Reliability

**5G networks promise low lag time – preventing that annoying jitter and other experience-robbing issues known as latency.** Under 5G, users should see a maximum latency of just 4 milliseconds, down from about 20 milliseconds on LTE cells. The 5G spec also calls for a latency of just 1 millisecond for ultra-reliable, low-latency communications.<sup>7</sup>



Higher Speeds



Lower Latency

## 6 The Big Economic Bang

**5G will unleash unprecedented economic growth.** The 5G value chain alone could generate nearly **\$3.5 trillion in revenue and support 22 million jobs by 2035.** Over time, **5G will boost real global GDP growth by \$3 trillion cumulatively from 2020 to 2035,** roughly the equivalent of adding an economy the size of India's to the world in today's dollars.<sup>8</sup>

### 5G Value Chain Potential



\$3.5 Tril in Revenue



22 Mil Jobs by 2035



GDP up by \$3 Tril from 2020 - 2035

## 4 Greater Efficiency

Not only is 5G faster and nearly lag-free, but it is also more efficient. **5G will consume less power on devices,** meaning longer battery life. 5G's greater network capacity also means that **the network will be able to handle the rapid growth of connected devices** driven by the demand of the Internet of Things.<sup>3</sup>

### 5G Efficiencies



Longer Battery Life



Growth Capacity

\*Taken from <https://internetinnovation.org/general/6-things-to-know-about-5g-infographic/>

**Glossary:**

- **Jitter:** Jitter, in networking, refers to small intermittent delays during data transfers. It can be caused by a number of factors including network congestion, collisions, and signal interference.
- **Latency:** The delay before data begins to move after it has been sent an instruction to do so.

**What do you think?**

What are some future implications of 5G technology that you can predict?