

Computing Innovation - Relationship to Data

The Big Picture

Identify the main parts of the computing innovation and describe how it works.

Innovation Name : 5G

Model/Version: fifth generation wireless

Vendor(s): Internet providers (Verizon, T-mobile, etc)

Cost \$: *Varies*

Target market: Users of the internet are the target audience of this technological development.

Describe the computing innovation: 5G is an acronym that stands for “fifth generation cellular wireless”. It improves the speed of the internet and allows better connection and quality.

Describe why someone would use the computing innovation (it's purpose): Someone could use 5G for a better connection and better quality to most daily internet activities.

Describe how the computing innovation works (it's function): It uses a router to boost the speed of your internet. It improves the speed of the internet to have better connection and quality of internet use.

Describe the computing innovation's impact on the world (it's effect): It allows people who use the internet for work or entertainment to have their connections run smoothly. The online world will change because the consumption of video and higher-quality image content will bring more people into the media. Our mobile applications will increase in complexity, and customers will ultimately be a part of a more immersive interactive experience.

Benefits and Harms

Describe how the computing innovation **benefits** and **harms** society, economy, or culture.

These could be current effects or potential future effects.

Benefits	Harms
Society: 5G will create faster internet speeds which could help in the medical industry. With Faster connection, the police would be able to call for backup or citizens can connect with 911 quicker in case of an emergency.	Society (<i>a specific part of a community or a group of people</i>) -emits radiation that has potentially harmful effects on people's health (not 100% proven but debated by many scientists) -leads to unhealthy cell phone habits and makes people less connected with each other.
Economy (<i>the wealth and resources of a country or part of a country</i>) Internet providers will be able to make a big profit because 5G is wanted by a lot of people. The amount of 5G sold is estimated to go up which would make the amount of devices sold that use 5G go up too.	Economy (<i>the wealth and resources of a country or part of a country</i>) Retailers lose money because faster internet leads to people buying more things online.
Culture (<i>customs, arts, or achievements of a group</i>) -Scientists like biologists and chemists and astronomers can get work done faster and may find a breakthrough discovery faster thanks to the faster speed that 5G brings.	Culture (<i>customs, arts, or achievements of a group</i>) -might have potentially harmful impacts on the environment such as radiation to animals which can harm and kill them. - Some 5G connection lines generate radiofrequency radiation that can damage DNA and lead to cancer.

The Role of Data

Describe how the computing innovation consumes data (as **input**), and/or **transforms** data, and produces data (as **output**).

Input (What data does the system ask for?)

The system asks for

A router is the system that takes the data that the 5g has and spreads it and makes it accessible

Transforms (How does the data change within the system?)

The router takes the 5g and it becomes a signal and that signal can be connected wirelessly or wired with an ethernet cord.

Output (What data is given to the end user?)

Internet data to traverse the internet faster.

Describe any potential **storage**, **privacy**, and **security** concerns associated with the data.

Storage (Related to how the innovation keeps data for future use.)

It uses a router that has to be plugged in that sends a signal to your devices and can be remotely disabled by your provider.

Privacy (Related to how data is protected against unauthorized access.)

There are passwords that are given to to customer from the provider to ensure no unauthorized access is given.

Security (Related to how data is protected from corruption.)

It is protected by password however if you don't have a VPN people can find your ip and disable your connection to the internet.

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Articles for evidence:

1.

https://www.realclearscience.com/articles/2019/04/30/is_5g_wireless_dangerous_no_but_science_may_never_end_the_debate.html

2. <https://www.rcrwireless.com/20191001/devices/2020-sales-5g-devices-120m>

3. <https://www.pcmag.com/article/345387/what-is-5g>

4. <https://interestingengineering.com/is-5g-harmful-for-humans-and-the-environment>

5. <https://www.howtogeek.com/423720/how-worried-should-you-be-about-the-health-risks-of-5g/>

6. <https://roninpbr.com/11-ways-5g-will-aid-your-business/>