Many organizations now utilize the internet of things (IoT) to allow their business to run more smoothly. According to Margaret Rouse of TechTarget (2020), the use of IoT enables businesses to "monitor their overall business processes, improve the customer experience, save time and money, enhance employee productivity, integrate and adapt business models, make better business decisions, and generate more revenue." For this discussion, you will choose one organization and explain how it utilizes IoT.

In your initial post, address the following:

* Which organization did you choose? Provide a link to the organization's website, if possible.
* What industry is the organization in (manufacturing, transportation, agriculture, etc.)?
* How does the organization utilize IoT?
* What are the pros and cons of the organization utilizing IoT?

In your responses to at least two peers, compare and contrast how your organization and their organization utilize IoT. Are there common trends among or within industries? Explain. Are there additional pros and cons of the chosen organization utilizing IoT?

**Reference**

Rouse, M. (2020). *Internet of Things (IoT)*. TechTarget. https://internetofthingsagenda.techtarget.com/definition/Internet-of-Things-IoT#:~:text=The%20internet%20of%20things%2C%20or,human%2Dto%2Dcomputer%20interaction

To complete this assignment, review the [Discussion Rubric](https://learn.snhu.edu/d2l/common/dialogs/quickLink/quickLink.d2l?ou=1969365&type=content&rcode=snhu-3177079).

I returned back to my old company! Here at Spectrum (or Charter, Time Warner Cable, & now Cox), we make use of the IoT in the telecommunications industry. Usage helsp to improve connectivity, optimize network performance, & deliver on groundbreaking solutions to consumers. One faucet of its usage is in the smart home & business services, using internet to power smart home tech such as security cameras, thermostats, & multi-frequency advanced home Wi-Fi that allow users to monitor & control their devices remotely. Additionally, IoT plays a crucial role in network management, with sensors deployed across infrastructure to detect outages, monitor bandwidth usage, and predict maintenance needs in real time. By leveraging IoT data analytics, Spectrum can improve service reliability, anticipate customer demands, and support emerging technologies like 5G and smart city applications.

This is not without its challenges, as maintenance is often required to keep robust systems up & running. This allows Spectrum to expand its service offerings, such as smart bundles for business. However, the increased reliance on connected devices introduces cybersecurity risks, as more endpoints become potential targets for hacking or data breaches. Privacy concerns also arise due to the vast amounts of user data collected by IoT systems. Furthermore, the demand for high-speed, low-latency networks to support IoT devices places additional strain on infrastructure, requiring continuous investment in upgrades. Despite these challenges, Spectrum’s adoption of IoT demonstrates how telecommunications companies are evolving beyond traditional services, balancing innovation with the need for security and reliability in an increasingly connected world.

Information provided to you from a former field technician who is now working in network design.

Communications, C. (n.d.). *What is the internet of things?*. Spectrum Business. https://enterprise.spectrum.com/articles/what-is-the-internet-of-things.html

In comparison between these two companies, they both need the IoT implementation to relay on real time data in different ways. John Deere uses sensors in farm monitors to check crops & soil conditions, while Spectrum manages network performance & smart home / business automation devices. Both systems aim to improve overall efficiency in various forms. Each has risks in the cyber security field which can cause catastrophic damage & money implications.

I find it interesting that both companies use cloud platforms to process IoT data, but with different end goals. John Deere's data helps farmers make planting and harvesting decisions, while our data optimizes internet speeds and prevents outages. We both have to consider the cost barriers for customers adopting our IoT solutions, though their equipment costs are significantly higher than our smart home devices. The biggest difference I see is that John Deere's IoT directly impacts food production, while ours focuses on digital connectivity - showing how broadly IoT applications can vary across industries.

Evening Ken, week six is upon us quicker than expected!

Your breakdown over Maersk’s IoT applications in global shipping provide excellent case studies of how sensor technologies & live monitoring are transforming such traditional services. I think I’ve seen their buildings or trucks before, but I had to go look up the company to make sure. While Maersk uses IoT primarily for physical asset tracking and maritime logistics optimization, my analysis of Spectrum reveals how IoT serves fundamentally different purposes in telecommunications. The most striking difference lies in their operating environments: Spectrum's IoT infrastructure thrives in connected urban landscapes with reliable broadband, whereas Maersk must overcome the unique challenge of maintaining IoT connectivity across vast ocean routes where network access is intermittent at best. Both companies demonstrate IoT's transformative potential, but where Spectrum focuses on enhancing digital experiences through smart home integration and network optimization, Maersk applies IoT to solve tangible physical-world problems like perishable cargo preservation and transoceanic fleet management.

The cyber incident needs to have more attention brought to it, as these sorts of incidents are beginning to happen more & more frequently in today’s technologic age of advancements. Maersk's 2017 cyber incident demonstrated how IoT vulnerabilities in shipping can cascade into global supply chain disruptions, creating systemic economic impacts far beyond the localized service interruptions that might affect Spectrum's customers. While Spectrum has some fallback systems in place based on region to supplement their network, Maersk probably has installed a specialized solution like satellite-based backups for aquatic operations.