**Potential Hurdles Limiting the Internet of Things**

**Bright future spoiled by significant obstacles**

The hype surrounding the Internet of Things (IoT) is immense. The basic premise behind the IoT is to connect everyday objects to the internet through tiny sensors, allowing them to communicate with businesses, consumers, and each other. A lot of people see the Internet of Things as the next great frontier of technology and consumer products, but just because many are predicting it doesn’t make it inevitable. Notable obstacles have appeared that may end up hindering the rapid spread of the Internet of Things. While these hurdles can be overcome, companies and industries should make note of them to prepare for what may be a hard-to-navigate future.

**Internet Availability**

The Internet of Things sounds good in principle, giving consumers unparalleled convenience and access to the latest technology, but there is one requirement that can’t be ignored: the internet. Without an actual internet connection, the IoT can’t function. While that may not be a problem for the majority of people, there are still many places in the world without an internet connection. Worldwide internet connections have to happen for the IoT to become a fully functioning reality.

**Significant Expenses**

It’s one thing to embed a sensor in a new consumer product; it’s another thing to place them on items and structures that are already widely dispersed throughout the world. One idea for the Internet of Things is to place sensors on roads, traffic lights, utility grids, and buildings, but doing so represents an expensive venture. Many companies have yet to be convinced it’s an investment worth making on such a large scale. Progress has been made concerning the expenses of the IoT, particularly in the creation of cheaper sensors, but more progress is needed before organizations truly embrace using them in everything. Until then, the full implementation of the Internet of Things will likely be delayed.

**Privacy and Security**

For now, the IoT appears to raise the concerns about privacy and security exponentially. When everything from a toaster to a shirt is connected to the web, what does that mean for personal privacy and sensitive data? Companies will need to show they can protect customer information if consumers will ever trust wearing shoes that keep track of where they go and how many steps they take.

**Data Surge**

It’s estimated that by 2020, around 26 billion items and objects will be part of the Internet of Things. With that increase in internet-connected items will come a surge of new data being generated. As of right now, many companies aren’t prepared to handle the amount of data that needs to be collected to make the IoT function well. There are many things businesses need to do to prepare their organizations for these new demands. New storage capabilities are needed, which can be done through in-house storage options or through cloud storage. New hardware is needed to handle an increased workload and more processing power. Businesses also need more effective data mining and the equipment to analyze data in real time. Once these technologies are adopted by more companies, the spread of the IoT will likely increase.