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Lesson 1: IT Trends

Although 3D printing is not brand new anymore, many businesses have yet to embrace this technology and are losing their competitive edge. 3D printing is an additive manufacturing technique in which a three-dimensional object is created by adding material layer by layer with the help of a computer program. Since the object created completely depends upon the computer program and the material used, we can almost create or print anything and everything using a 3D printer. So we do not ask ourselves, "What can 3D printing make," we ask, "What can't 3D printing make?" Modern consumers want high-quality products from businesses, with many willing to pay more for a top-notch product than pay less for a substandard product. 3D printing solutions help businesses offer market high-quality products at a lower cost. The computer-controlled 3D printer provides a replica of the original product or prototype, ensuring the quality is second to none. This reasons why important products such as dental braces, jet engine fuel nozzles, and aircraft and satellite parts are being produced using 3D printers. Using 3D printers, businesses will require less equipment, meaning they save on space, lower the cost of operation and maintenance, and speed up the manufacturing process.

In the present business world, we witness the overlap of the real and virtual worlds enabled by advanced technologies, with digital mesh at its center. Digital mesh is transforming

current business models to accommodate people, processes, and smart devices in a collaborative framework for the highest earnings. Today's wearables, sensors, or mobile devices do not merely collect and share data but interact with each other in a way unheard of in the history of businesses. For example, a chatbot has been given human characteristics to make real-life interactions enjoyable and enriching for consumers. Modern businesses have much to gain by embracing advanced technologies within their operative frameworks. The businesses that have already adopted digital meshes in their business models have seen an increase in the following: technology awareness, data-driven decision-making to provide transparent marketing services not possible before, real-time consumer engagement services, and heightened brand loyalty because of increased real-time interactions with business representatives and personalized guidance.

However, with our advances in technology, there are necessary changes needed in cyber security. In the past, the architecture of cyber security was stagnant, with firewalls, software, and the like in place. A typical instruction defense system or instruction prevention systems were only as good as their last update. All of these measures were unable to receive feedback and adapt. This architecture fed into the cyclical nature of cyber security that we have become accustomed to; a new update, a new threat, a new update, a new threat, and so on. However, adaptive security has changed the game for a business's response to a threat. It receives feedback to increase the ability to respond to threats using a multilevel, around-the-clock monitoring system designed to evolve as cyber threats evolve. Adaptive security architecture gains knowledge from experience, allowing for potential breach response to be reduced to milliseconds. With adaptive security, businesses can prevent data loss, recognize ongoing

breaches, and contain threats as their defense system predicts, prevents, responds to, and defects threats.

In the next five to ten years, I think we will witness even more technological breakthroughs. In the past year, we have seen ChatGPT, a new AI language model, introduce itself to the world where it generates poetry, prose, coding, humor, essays, song lyrics, fictional interviews, and stories. I also think that trillion-dollar companies like Apple and Amazon will release more technology involving artificial intelligence. Likewise, I would not be surprised if Apple came out with a new piece of technology and increased its technological chokehold on people (including myself). I also think that profound scientists and researchers will announce a year in which Earth will become uninhabitable because we did not listen to today's scientists. Scientists told us our actions would have consequences and explained how we could slow the rate and limit the amount of global warming by reducing human emissions of heat-trapping gases and soot, but we were too ignorant to listen. Thus, we will further our Mars exploration and colonization to save our species.