Industriell digitalisering

IBE505

1

a) UPS could optimize delivery routes and combine delivery with pickup to get a faster delivery time. To get real-time package tracking, they need to scan and have some devise that allow them to track the packages.
b) To optimize delivery routes, they can use some sort of map that can track traffic and calculate the best rout. Combining delivery with pick ups can be achieved by planning ahead. UPS could simply use smart phones or something similar. Smart phones have GPS among other things that can be used for tracking. This is an easy solution and should be easy to implement.
c) My role as CIO is to be in charge of new innovation and implementation that occur within the company. For example adaptation of new technology.
d) We could outsource to someone that has the skills we need, or we could hire new staff that has the skill.
e) My digital transformation solution could positively impact SDG number 13. Optimize delivery routes and combine delivery with pickup would have a positive impact on the environment, due to less fuel consumption and road wear.

2

a) They can use AR/VR devices and have a digital space where the students can run lab experiments together.
b) Some type of software that must be installed to take the exam. The software can either make it so that you can't use other programs during the exam, or it could monitor the computer activity.
c) The students can use VR glasses and play in an online environment. For this to work well, they need a stable internet connection. The software also needs a stable internet connection. You could also automate the flagging proses with an AI.

d) There could occur technical problems. The students could be distracted and loss motivation.
e) My digital transformation solution could positively impact SDG number 4 quality education, because it would improve the quality of the education for the students.

3

a) You could use automated robots to move patients and equipment. That way lowering the need for staff and making the hospital more efficient. The robots are an investment that in the long term could be cheaper than staff salary.
b) The robots would need some kind for ai to move around and preform tasks. It needs sensors and cameras so that it does not crash into things and are aware of its surroundings.
c) Advantages would be that you could track and store the data that the robots gathers. Storing data in the cloud could also be more cost efficient. Disadvantages is that there could be technical problems and you must have an internet connection, or the connection could be bad. There is also the risk of cyberattacks. The four different cloud models are private, public, hybrid and multi.
d) The implementation of robots can be expensive, but the investment could pay off. There actually are some hospitals in Norway that has implemented robots, so it is very much possible.
e) My digital transformation solution could positively impact SDG number 3 good health and well-being. It would make the staff more available and make the hospital more sustainable.

4

a) Defensive strategy are management tools used to defend against an attack for a competitor. Offensive strategy is more of an active approach where the company invests development, technology, and research to get ahead of its competitors. Using a defensive strategy, the company could use defensive marketing to assure that costumers stay loyal. This will make it harder for new companies emerge. Using a offensive strategy, the company could target a well-established competitor to obtain its marked shares.

b) With covid-19 came social distancing. A lot of industries adopted the concept of working from home. Education is a good example where the students have digital lectures they can participate in from home.

c) Technical debt is the expected cost of rework, when developers push out code that later has to be reworked. In this case developers prioritize delivering working code fast, rather that delivering optimized code.

d) Some of the leading indicators of failure in an industrial digital transformation are misaligned vision, technological, economic factors. Example of this could be a development of a product that never se the light of day. Too much of an inward focus rather than an outward focus or an underperforming product.

e) Lighs-out manufacturing is when the entire production line is fully automated and where people only are used for maintenance or repair purposes. Industrial digital transformation is driving lights-out manufacturing by innovation in robotics, ai and other technologies that contributes to automate the production line.