IBE505

Industriell digitalisering

Kandidatnummer: 2

Task 1

a) One of the solutions for enhancing the efficiencies of the company is implementing a dynamic optimization of warehouse operations. A warehouse with this management system can direct and validate each step in a movement of goods in the warehouse and capture and record all inventory movement. This system can be a standalone system or part of an ERP system.
This pick-and-pack process will improve in the warehouse, the rate of the replacement of different inventory items will be faster and the inventory movement and management to logistics and material handling will be more efficient. All this combined will give the customer a faster delivery and the efficiency of the company will cost less money for the company and improve the overall earnings for the company and the stakeholders.
For real-time packaging, I will propose a blockchain solution. With blockchain the company can always track a package in real-time, this is because transactions are always time stamped and up to date. The company can then share the track and trace of the data with the customers in real-time.

b) An emerging technology that will be used for the implementation of this system is AI. The AI is used to process the data gathered from these varied sensors from multiple systems.
Blockchain will also be a technology that will be implemented in this solution.

c) My role as a CIO within UPS is responsibility with the implementation of the solution. I will also managing the IT staff that will help implementing the solution. It I also very important as a CIO that I'm staying updated with IT trends and emerging technologies so the company can stay efficient.

d) If the business has a gap in the skills required to implement my innovative solution I would let the HR department know that I need a new employee and as a CIO I would interview people to find the right expertise so I can implement the solution without any problems. I will also make sure to create a training plan for each individual on the team that implements the solution. This will help for a more efficient implementation.

e) Goal 9: This will significantly increase technology development and innovation. This could also help countries in developing.

Task 2

a) I solution for this would be VR or games that students can collaborate with. The VR will make a real live feeling to the lab experiments. Also games where they can run lab experiments on the pc can help the students learn differently. The learning experience will of course be different than being in school, but VR and games could still benefit the student if online learning is the only option.
b) I live video of the student taking home exam is a solution that will prohibit suspicious actions on the exam and enhance the credibility and fairness for other students. The Video camera will be place behind the student and this will show what the student is doing on screen, but also showing what the student is doing on his desk. I will also propose with this solution that the student must also clean his desk before exam so it's easier to monitor what the student is doing.
c) You will need a camera and a stable internet connection and a digital live streaming software. All the video footage will be saved on a cloud that only teachers and sensors have access to.
d) The challenge that might impact online learning is adaptability, this is because students can find it difficult to adapt to the online learning environment when they are used to the regular classes in the school. Technical issues are also one big problem when it comes to online learning. A lot of students might have a very bad internet connection, this will make it hard and frustrating for the student to follow the class. And the last thing is computer knowledge. Some students might have problems with the utility the PC can offer, and this can cause a lack of learning if the student doesn't get help.
e) Goal 4: Quality education. This will ensure that all learners will acquire the knowledge and skill to promote sustainable development, and they have to follow the class to not cheat on exams and assignments in school.

Task 3

a) I will propose a solution with AI scanning. This solution will help the staff determine which patient need help first and will help the staff to channel the patient to the correct department.

This will also reduce people in the waiting rooms and will take the burden off the staff. The AI will use automated voice systems and chatbots to help the patients.

b) The emerging technologies that will be used accelerate this transformation is AI.

c) The advantages of using a private cloud is low maintenance cost, easier back up restore and data and security for the patient. The disadvantages is that cloud depends on internet connection, if the power is down the AI or the cloud will not work. The security can also be a problem if you are using a third-party vendor, because all the data will be sent there.

Public cloud, private cloud, hybrid cloud and multi cloud.

d) Since this is an AI solution that works with the cloud. The non-profit/public organizations can use the software on PC's that they already have to accelerate the implementation of the solution. They can also use a third party vendor for lower cost. This is obviously not preferable, but if this can help the hospitals and the healthcare in a desperate time, this could be a solution for accelerate the implementation and help the staff.

e) Goal 3: Good health and well-being. It will help patient to be treated correctly and reduce the cost for in developing countries.

Task 4

a) Offensive strategy is a corporate strategy in the industry, the goal is to pursue changes within the industry. This strategy also favors investing in technology. This is because they will try their best to stay ahead of all the competitors.
Defensive strategy are tools that are used for guard them self against attack for competitors. Defensive strategy is about knowing the market you in, and about when you should expand into new markets.

b) The Covid-19 have been good for some businesses when it comes to digital technologies. For example, remote working/lectures. Before Covid-19, remote working/lectures was not a big thing. But when Covid-19 happened, everyone had to stay isolated and away from people. This also meant not going to work or going to classes. Remote in digital technologies exploded and everyone started to use it. Some companies earned a lot of money because of this, for example Zoom and Microsoft Teams.

c) Technical debt is defined if a developer is taking shortcuts during a software development to finish a job. If this occur, the developer is in debt and the developer must pay back in the form of reworks of the software.

d) Individual project is not achieving the business value, because of this the company will never reach completion of the digital transformation. Lack of digital strategy is also one of the indicators that the digital transformation will fail.

e) Light-out manufacturing means that the entire production line is fully automated. The only roles of the employees is maintenance and repair purposes. The reason the industrial digital transformation is driving the light-out manufacturing is because of its low cost, fewer employees and faster and more efficient work.