1. 1) UPS is an American shipping and supply chain management company that intends to use digital tools to synchronize its operations and logistics strategy to better meet customer needs. They ran interviews with a portion of their customers and concluded that there are two major customer experience challenges UPS need to deal with: 1) fast delivery and 2) real-time package tracking. As a chief innovation officer (CIO) at UPS:

    a) Can you propose a solution that can significantly improve the customer and stakeholder experiences and enhance efficiencies of the company operations?

    Fast delivery: Today UPS is quite fast and can deliver 2-3 in up to 80% of the world. But something they can improve is the use of drones to deliver important and light packages over small distances. Like over seas to a little island. They can start use one more plane facility then the one in Kentucky to get things shipped faster by plane.

    Today the tracking system is when the package get loaded or unloaded is scanned and the tracking system gets updated. A dream solution for the customer will be that you can track the plane, ship or truck live and not just when its loaded and unloaded. If they to this the customer can see if there are some traffic delays. Blockchain is a good way for all to see the information.

    b) Describe what emerging technology you will use to implement that solution?

    The use of blockchain technology is a very good way to use if you want full overview. You can easily see where the package got delayed and then ask why? Is it a human fail or a machine, normally it's a human mistake and not a machine.

    c) Define your role as a CIO within UPS?

My job as a CIO within UPS is to make something with the technology and make it work. Be innovative and find new solutions with technology.

d) If your business has a gap in the skills required to implement your innovative solution, how would you help your business to bridge that gap?

They I will make them understand why its worth invest more in this new solution and how it will benefit in the long and short run. And then hopefully get more reassures to close the gap.

e) The Sustainable Development Goals (SDGs) are a collection of 17 interlinked global

goals designed to be a blueprint to achieve a better and more sustainable future for all. The SDGs were setup in 2015 by the United Nations and are intended to be achieved by 2030. Which SDGs your digital transformation solution will positively impact and how?

3 Good health and well-being: Cause of the use of drones to deliver medicine will arrive a lot faster to places that are hard to deliver to. Like an island.

13 climate actions: With the use of a drone instead of a ship or a car to deliver a small package will reduce the CO2.

2. 2) The COVID-19 pandemic has affected the education industry and nearly all institutions have been adopted to digital education approaches that make it safer for both students and teachers to meet social distancing constraints while keeping the academic standard unaffected. Major problems with remote learning are the limited access to labs and lab equipment and inability to monitor suspicious activities such as opening tabs, chat boxing in the background, picture exchange and more while students are taking home exams.

a) Propose a digital solution to help students to collaboratively run lab experiments from their own locations while enhancing the real feeling of objects and their learning experience?

First problem is that maybe 10 % of the students don't have their camera on, if that change you will fast. The best solution will be if we start using VR then everyone can feel that they are at the school even if use is sick. Its first then I think the labs can work close to 100% digital.

b) Propose a solution that can monitor students' activities during home exams such that it can provide real-time feedback to prohibit suspicious actions and enhance credibility and fairness of such exams in the future?

One solution is to have a live camera under the exam. But it is a lot of error using that too. Like if u got to go to the toilets, then you can use your phone to call someone. Another thing is that people with the best digital knowledge and have the best equipment's can always beat that system with the right tools. But the poor people don't have the right tools to do that, so that's not fair.

c) Describe the emerging technologies you will use to develop these solutions?

Used educational technology with the VR to import all learning experience but mainly the labs. If this project gets started a lot will change may be less people will come to school but now everybody can participate better than ever, also people that are seriously sick.

d) What are the challenges that might impact online learning?

The social skills and human contact will not be 100%. Its receivers more from the teachers, they need to develop more digital skills if this can work. And to

get this stated today will never work because of the skills to the normal teacher. But it's just to start and try and learn!

e) Refer to 1e), which SDGs your digital transformation solution will positively impact

and how?

4 Quality Education: Now everyone has a chance to learn, even if you're sick or out traveling. Or another reason to not meet at school.

11 sustainable cities and communities: Its safer for all if you feel a bit sick to follow the school from home.

3. 3) As hospitals strive to provide the right care to the right patient at the right time, healthcare providers need to do two things: evaluate patients' needs accurately and manage hospital resources effectively. Shortage in healthcare staff can lead to overworking, crowding and hence more medical errors, and patients feel neglected.

   a) Propose a digital transformation strategy to mitigate healthcare personnel staffing shortages in hospitals to lower operating costs and enhance services?

   I will start with the education for the nurses, almost every job to they need more digital skills then before. They need to adopt fast. More IT in school for nurses. I would maybe start a little tracking system to see where the nurses use more time and where the use less time than normal. With this information we can make a system that allows some areas to "steal" some time from less important areas. It's no point to digitalis the hospitals without people knowing how to use it.

   We got to stop underestimate the patients too, give them a computer or pad who can help the with a lot of easy questions they have. The machine learning will only make them smarter and smarter each day, and so they can each day help more and take tasks from the nurses.

   The robots are coming to the hospitals and will help a lot with easy tasks, but humans need human contact so we need more nurses and doctors. I don't think

this is a problem in the future, because of the robots and computers will take over a lot of jobs so more people going to apply for jobs at hospitals in the future.

In the future doctors can use Virtual & Augmented Reality to assist operations on the other side of the globe.

b) What emerging technologies you will use to accelerate the proposed transformation?

I will use robots and of cause AI and machine learning will take a lot of "stupid" tasks of the nursing personnel. If we start now with the AI will only be smarter the earlier, we start.

c) State advantages and disadvantages of implementing this solution on the cloud. State the four different cloud models?

Some disadvantages will be that its new and mistakes will be made by the personal that work there and by patients. If the network or electricity are gone will always be a problem with or without the technology but maybe a bit worse now. It's always some backup generator but things can shut down if the power goes off and break down.

Advantages will be the reduced cost to the hospital with less overworking personnel and that the nurse have more time to take their breaks. Innovation and digitalization are come either way, so this is only a good thing, just accept the changes and let them help you.

Public cloud, Private cloud, Hybrid cloud and Multicloud.

d) Hospitals and healthcare providers as non-profit/public organizations does not have the skills and resources to finance, develop and run such projects. Can you propose a way to accelerate and complete this solution so expected services are delivered to the public on the right time?

The state got to go in here and understand how big of a problem this is and that it needs a change and that fast. If the public organizations don't get the support, they need will the private organizations get a too big head start and the people that don't have money will get worse treatment then rich. We need to invite the people that run the state to come and see a whole day at work at a public hospital to understand that we need to develop this project now.

e) Refer to 1e), which SDGs your digital transformation solution will positively impact and how?

3 Good health and well-being: in form of better and more reasonable healthcare true more use of robots.

4 Quality education: In form of that we update the learning system at schools.

9 Industry, innovation and infrastructure: Robots and digitalization of systems at the hospitals.

4) Industrial digital transformation can be defined as the minimum effort to stay in business.

a) In the commercial sector, industrial digital transformation is driven by two kinds of strategies: defensive and offensive strategies. Define and compare between the two

strategies with examples?

Offensive strategies: Is when a company wants to always be before the competitors when it comes to technology. They want to the leading in the market and ahead of the rest when it comes to developing and launching new products first. A good example as an offensive company is Tesla motors as they when all on electric cars even if it was not profitable business. They knew that this was the future.

Defensive strategy: Is when a company just want to defend them self against attacks from other companies. The company that uses this strategy think that innovation is not necessary unless the competitors have already done it, the priority is to protect the things we have like the customers, suppliers and assets. Almost every car company is an example of defensive strategy, like they did a few electric cars, but dint go full electric because of the economic. It's not before today its start to be profitable to produce electric cars.

b) Crisis has always helped industries to identify an opportunity for transformation. A new survey finds that responses to COVID-19 have speeded up the adoption of digital technologies by several years ahead. Explain that with examples?

We can see a lot of changes after COVID-19, like in school a lot have change and we have tested new whings and it have work fine and school have continued like before because off this.

The place we can see the biggest change is at companies and how they have adapted. We can see how good home office have work and zoom meetings instead off travels. This is something that have changed for ever, we didn't see a lot of home office before covid-19 but now its gone be normal. And this haven't happened unless off covid-19.

c) Define technical debit?

Technical debt is witch results and development groups start to fine solutions that will fasten t he delivery of a function or a project that later got to refactored. (Varan, Shyam Nath, Ann Du nkin, Mahesh Chowdhary and Nital Patel, 2020)

d) What are some of the leading indicators of failure in an industrial digital transformation?

Poor management and not get people to use the system as the management wants to. Let people try and let them adapt without scary them.

e) What is lights-out manufacturing? How is industrial digital transformation driving lights-out manufacturing?

It's when you almost don't need any humans at a factory just machine. In this full automated f actory's, no human is needed and everything goes as programmed and no human fails. (Varan , Shyam Nath, Ann Dunkin, Mahesh Chowdhary and Nital Patel, 2020)

Sources:

https://sdgs.un.org/goals

Industrial Digital Transformation : Accelerate digital transformation with busines opti mization, AI, and Industry 4.0
Varan, Shyam Nath, Ann Dunkin, Mahesh Chowdhary and Nital Patel, 2020