1

a) I would propose making a software who can predict the traffic and make the most efficient delivery route based on available information from cameras and such. And for the real-time tracking problem, I would suggest that the customer can see where the vehicle delivering the package is real-time. Giving every package a trackable chip of some sort would be very expensive, but of course if the customer is willing to pay for, that could be a solution as well.
b) For the software to make the most efficient driving route, UPS would need IOT, cameras and stuff like that to monitor the traffic around the cities, and AI to make the best routes.
c) As chief Information Officer I would be responsible for infrastructure, sourcing, security, and operations of everything.
d) I would suggest hiring someone who have the knowledge to bridge the gap in the skills the company are missing.
e) My solutions will positively impact SDG goal number 11 and 13. Number 11 because my solution require Iots, and I don't see anything wrong in sharing the information we are gathering for the traffic software with rest of the city if it can help the environment. Number 13 because the software makes the transport more efficient, less Co2 is released from the transport vehicles, helping with stopping global warming.

2

a) It all depends on what the lab experiments are, if its something more on the simpler side, screensharing and using cameras would suffice. But if it is something more complicated, needing special lab equipment, I would suggest using VR headsets. The schools can make software who emulates whatever lab equipment they need for the experiment. Of course, giving every student a VR-headset is going to be very expensive, so lending them out for a semester might be the way to go.
b) Locking the student's pc for the duration of the exam would be a start, but students can easily get around that by using anther computer or mobile phone to communicate. If locking the pc is not an option, then as long as the exam is going a program can monitor the student's microphone, and blacklisting program such as Discord and teamspeak etc. The program could listen for certain keywords, which would alert the teacher. But again, students can easily get around that.
c) AI could be used to catch certain keyword said by the students into their microphone to alert the teacher that something fishy is going on.
d) Challenges that might impact online learning is then the teachers do not know how to use the school software or hardware properly. Students lacking proper pc's and don't know how to use the school software. Slow internet connections on both parts causing lag. Teachers not willing to use all hardware/software available to them. Teachers who can't organize the subject page (for example Canvas) so it's easy for students to find the material.
e) My solution will positively impact goal number four on the SDG list. The reason being that it will help students learn better then they can't be at the school.

3

a) I would suggest a software which has up to date information about the patients and gets updated with new information about the persons conditions from the healthcare workers if the person is hospitalized. The patient is monitored by the software in real-time and can help by telling the health workers about the dosage of morphine for example if that is needed. Which again can help relieve some stress for the health workers.
b) I will use AI in the software to help the health workers do a better job
c) An advantage for implementing the software in the cloud is that if a health worker must visit the patient at home, he/she have access too the software, and can hopefully do their job better, disadvantage can be that they are reliant on a good internet connection for the software to work properly. The four different cloud models are: Public cloud, Private cloud, Hybrid cloud and multicloud.
d) They can ask a software development company if they are interested in helping out with the project and implement it inn this specific hospital, if they see that the stress of the employees and that the patients is happier with the treatment, they can ask the government for funding.
e) My solution will positively impact goal number 3, because the program will help the health workers do their job better, which will hopefully get people out of the hospital quicker and lead to less stress for the workers.

4

a) Defensive strategies are to protect the business form competitors and disrupters and offensive strategi is the opposite where the company tries to disrupt the rest if the industry by being offensive and innovative. This example is from the pensum book. Most vehicles manufactures started making electric cars as e defensive strategy. It is said that US car manufactures lose 7,000 $ to 10,000 $ per electric vehicles. The biggest reason they make them is because the market is expected to grow by almost 20% in the next decade. With breakthrough and such the productions cost is expected to go down. Tesla on the other hand is using an offensive strategi, they charge a premium price for their cars, and strive to be a premium car manufacture. They are also innovating in batteries and autopilot software.
b) Then covid hit, people needed a good conference software since so many had to start working from home, this is where Zoom comes into the picture. Almost every school and company are using zoom. Another example is foodora and such companies delivering food to customers from the restaurant, which means people don't have to walk out, stopping the virus from spreading. One more example is ferries In Norway before covid you had to pay for the ride to an employee, now they take a pictures of your car's license plate and you pay for it later.
c) I presume you mean technical debt and not debit. Technical debt are then companies, and such still uses old and obsolete software and hardware.
d) Some of the leading indicators of failure is projects that do not achieve the expected value or those that never gets finished and must be restarted. Bad strategy for transformation. Failed transformation can lead to bad results, companies losing their competitive advantages or in worst case scenario, file for bankruptcy.
e) Lights-out manufacturing is then the entire production line is fully automated and the only role of people in the factory is for maintenance or repair purposes. The industry is trying to keep up with Moore's law that says that the numbers of transistors in a device would roughly

double every 2 years. Which again drives the lights-out manufacturing because everything gets better and more automated.