1a) A solution could be to strategically transform, and have a total revamp of the business processes.

*This is in order to ensure that everyone is playing their strongest role in the company. i.e delivery, administration.

*Reevaluate the current business process, increase cost-efficiency.

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1b)

i would likely implement a function to track traffic, to gather travel data from different places - to know when and where to hand out packages, in a route determined by the data. theres also some emerging technology which uses “node-like” sensors. where one node could alert the network in regards to physical hazards on the road. solar panels are also very optimized, and could be used to modify vehicles in the long run. where solar panels are responsible for starting the engine electrically, instead of the rather expensive crank.

1c)

CIO are at the top of operational responsibilities. they deploy and maintain the technology to support different business operations. in constrast, CDOs are often acquired with a goal of creating business value, using assets or freshly recruited capabilities.
CIOs does not have Profit & Loss responsibility, like CDOs have.
In summary, CIOs have more of a supportive role towards other colleagues, in comparison to the CDO.

1d)

Gap in skills required to implement innovative solutions are to be proven, you can compromise by adding extra services, recruit or outsource work.

1e)

My innovative solutions will contribute to not increasing the spike of traffic, aswell as reducing the emissions from driving a vehicle. the SDG goals of 13 climate action and 7 affordable and clean energy, 11 sustainable cities and communities, are the ones that are directly correlated.

2.

a) The digital solution to help students collaborate in running lab experiments would be simulation. This ensures that the students can experience the reactions or actions of different chemicals or material.
b) A solution would be to have all the attendees download an “anti-cheat”. a software which ensures that nothing outside of the ordinary is allowed access, within a timeframe. maybe listening through microphone would be an alternative to save, as it could reveal cheating.
c) I will use programming as my emerging technology to develop these functions. Python will be perfect, as it is suitable for machine learning, which is great at detection.
d) The challenges that impacts online learning is mainly the connection to home, the upside of leaving for school is that you don’t have to respond or make chores within the free time. this gives time to reflect upon the things learned. etc..

e) The digital transformation will positively impact 5, 4 , , 9
4 Quality Education - This is the main goal that is targeted. By combating cheating you could get increased learning capabilities from students. This is also regardless of gender. which ticks the SDG goal 5. equality for both biological genders. and hits 9 because of its innovative execution of a remote exam.

3

a) to ensure that medical staffers are well managed - one could start deploying medical drones, to some scenes. this reduces the total required workforce. and allows doctors to review the harm from afar. You can also assess the workforce to reduce its worktime and increase the amounts of shifts.
b) Medicinal drones or drone delivery in medicine would be gamechanging. it will allow the ill to take the test, and get answers within the same day, practically speaking. The old traditional way of transport was too inefficient. One could wait for weeks on end, before receiving any response.

c) **Public Cloud**. offers access to hardware and software services through internet. owned and managed by the provider and users are charged by their usage. customers are able to share infrastructure. Using Infrastructure-as-a-Service computing and storage, Software-as-a-Service applications and Platform-as-a-Service for app development.
The advantages of public cloud are high scalability, reduced costs and high uptime. The weakness are often downtime, greatly reduced security and lacking services. will have a hard time adapting to complex requirements.

Private cloud: this is an implementation of infrastructure within the cloud, that operate solely for one company. This is also called the internal or corporate model. servers are hosted on premises of the owner company. they are being held and maintained on private networks which use hardware and software used for only the owner company.
The advantages of the private cloud is that it has high scalability and kept secure, reliably. often requires authorization to use. The downside to this is the high cost as it requires a substantial amount of funds for software, hardware and staff coursing.

Multicloud: similiar to private cloud, but varying userbase. it is cheaper and allows users to share their work easier. this is also without compromising the security or availability. This is compared to the public deployment model, rather expensive. also does not delegate fixed storage or bandwidth capacity,and is not popularized yet.

Hybrid Cloud: This is a cloud model which combines all the strengths of other cloud models. allows the entities to customize the facets that best suit their needs. The hybrid cloud does not compromise safety and controls with cost. This facilitates data and application portability. efficiently.
The advantages are improved security, flexibility, scalability all at a cost-efficient price. The downside is that it is very difficult to implement. and

compatibility and data integration that requires that the users can split data into sensitive and non-sensitive subcategories..

d) My proposal of launching such project would be to have the government delegate funds for the initial startup, or have the private sector step in, in collaboration with the state-owned health institution. Private sector should step in more because of its fast phased evolution.
e) My solutions hit the goals 3) Good Health and well-being. 9) Industry innovation and infrastructure. 5) Gender equality. This is because while maintaining the busy hospital, we adapt to saving the patients aswell as the workers. this is done by innovative means - potentially saving workforce and time by implementing drones, and a more feasible workflow. This allows us to attend to and assess patients a whole lot sooner than before, without needing the same attendance, independant of genders.

4)

a) Defensive and offensive strategies are deriving from properties as safety and innovation. Defensive as a concept is more or less adapting to the current market. Acquiring the required tech or software in order to stay in line. Offensive on the other hand, is driven by innovation. attempting new technologies or all in all not adapting to the scene. The example of a offensive actor in the market, is Tesla. Which went head-first, into the market of electric vehicles. revolutionized the market with new technologies and groundbreaking design. That impacted the scene of traditional car manufacturers that also wanted to contribute with their vehicles.
b) The COVID crisis is a great example of how vulnerable we are. Reason it is happening now, is that we see the benefits of adapting to a more contact-free society. during the pandemic, groceries experienced way fewer sick-days from its employees. This is popularily believed to be the work of plastic barriers and increased sanitation. This is also an opportunity to develop something for a market which will be growing, as years pass on.
c) (assuming you ment technical debt..)
This is considered as expenses related to improving or updating bad code or obsolete software or hardware.

d) The leading indicators of failure in an industrial digital transformation is The lack of a transformation strategy. The board neglecting or not providing oversight for the transofrmation which leaves the effort in hands of management(Varan, Nath, Dunkin, Chowdhary, Patel).’
e) The lights-out manufacturing is referring to the production line as fully automated with leaving the only function of physical attendees, as maintenance. the digital transformation wants to improve efficiency and reduce risk. therefore is the digital transformation so prominent in automating and evolving the industrial scene.

Source:

Nath, S. V., Dunkin, A., Chowdhary, M., & Patel, N. (2020). *Industrial Digital Transformation: Accelerate digital transformation with business optimization, AI, and Industry 4.0* [E-book]. Packt Publishing.