1)

a) Fast delivery is tough one due to the limitations of large physical distances so let us start with real-time package tracking. UPS must have an internal system that keeps track of where every package they have in their possession at all times. However detailed information they have on their packages, the first step would be to make that public for the online package tracking site. They probably also have a tracking app, but if they do not, they should develop one.

   Their system might, but I would suggest that they have a system which keeps track of when packages enter a last mile van. With UPS' ORION routing software, there should be no doubt which route the van will drive and have been loaded up with packages for (Nath, 2020). This should enable the customers to get an ETA with quite high accuracy on when their package will arrive. This is great for B2C, but for B2B shipping this would allow businesses that are waiting for a missing part to plan ahead and get everything else ready for when the missing part arrives. If a delivery wan breaks down the ETA could be updated. UPS could also share the location of the broken-down van with the customers, depending on the situation some business might save money by driving to the delivery van and picking up their package. Regardless my point is that as long as the information is useful the customer and stakeholders, they should have access to it to improve their decisions.

b) Smartphone technology is not emerging at this point, but make a package tracking app. Integrating the package tracking website and package tracking app with the system through API technology. And lastly have GPS sensors and LTE communication on each delivery van.

c) As CIO my job would be to look at new technologies emerging and try to imagine if and how these technologies could add value to UPS. Not just how could these technologies fit into todays UPS, but how could UPS change to encompass these technologies. And would said change be good or bad in the long run.

d) Firstly, identify what kind of skill gap we are looking at. If it's a one time job to change or implement something new, then outsourcing the job to someone else might be a good solution. If it's a small job, but it demands continual improvement and maintenance, then hire a new team with that knowledge. Potentially hire one or two experts if we have

the team already as they could lead the way and teach the other team members. If we are talking about a change or skill gap that changes the way everyone does their job, then office training. If this change is something others have done previously, then look for someone familiar with the transition and have proven themselves in leading the transition. If I think most workers would be resisting the change, then I would arrange a voluntary nonpaid discussion about it outside of work hours. That way only the first adopters and the ones most excited for the changes would show up. Tell them about the changes and over the next weeks let them spread the word and their excitement about it. Then the actual change would be easier to implement.

e) I don't think my transformation improvement would have a big impact on any of the SDGs, but it could play a small part in goal 9 with improvement to industry infrastructure (Nath, 2020).

2)

3)

4)

a) Defensive strategy is based upon sticking to the same business model for as long as possible and only changing and adapting when the environment around is forcing or heavily incentivizing adapting the same changes. An offensive strategy does not care as much about what the other in the landscape are doing. But are one the lookout for breakthroughs and ideas that they think can improve their service or product. The biggest reason there are two strategies are risks. With a defensive strategy you simply do today as you did yesterday because last you checked what you did yesterday worked. With an offensive strategy you risk a lot by moving away from what you know works and towards something that could turn out to be better or could just fail. Benefit of being having a defensive strategy is that you get to watch what works and what don't, and then you can adapt the technologies that turned out to work. Example of this is Kodak. Kodak was a great analog film and analog camera company. As more and more things switched from analog to digital most camera companies decided to transition from analog to digital camera technology. Kodak decided to stick with analog as they believed that would always be what people wanted. Digital cameras improved year over year and became more and more popular. Kodak went from being the largest camera company, to becoming one of the smaller ones, as they failed to adapt to the digital age. While Sony

who bet on and adapted digital cameras, became one of the biggest.

b) Innovation is to some degree the result of how much collective energy and focus is spent on improvement. A crisis like COVID-19 makes a lot of people unable to do their jobs which forced them to think about how digital technologies could help them continue to do their jobs. This let to a lot of people focusing on digitalization at the same time, which lead to a lot of improvements. Video calls have been around for a few decades, but with the pandemic its usage exploded as everyone everywhere had do have digital meetings and education had to happen over video as well.

c) Technical debt is that government agencies due to lack of funding are lagging behind when it comes to the quality and age of the technologies they use.

d) The biggest indicator of industrial digital transformation is the lack of a transformation strategy

e) Lights-our manufacturing is fully automated manufacturing where no humans have to be present. Different materials enter on one side and finished products come out the other side. Benefits of this is that humans make errors and machines do not. Therefore, the quality of the products are not in risk of being affected by humans having “a bad day”. It is expensive to design and implement lights-out manufacturing, but once you got it right there are a lot of cost savings in each product. When one company have managed lights-out manufacturing. The other companies have to do the same in order to keep up long term.

Sources

Varan Nath, Shyam, Ann Dunkin, Mahesh Chowdhary, and Nita Patel. 2020. Industrial Digital Transformation. Birmingham, UK: Packt Publishing.