

Assessment #1:

1.

i. We've been asked why the construction industry is so different from other industries. We should take into consideration the fact that the construction industry is at the very high point at the moment due to the fact that a lot of investment is done via the construction industry also the construction industry tends to be one of the most desired industry to work within. There are numerous agencies involved or partnered in the construction industry making sure that every project meets the requirements of the owner, government parameters, safety and the integrity of the work and workmanship.

ii. Construction sites are noisy, dirty, and dusty places to work, and the likelihood of being struck, crushed, or injured in some other way by falling materials, moving equipment, or hazardous materials is quite high. It is very hard to keep an eye on every person that is in the site but it is the site manager's responsibility to make sure that the working condition is the safest possible complying with all the regulation in place.

iii. Some of the requirements of the first line manager are:

Motivates workers to accomplish all objectives

Encourages teamwork spirit

Ensure workers are disciplined

Deal with all manner of conflicts arising at the work site

Promote a good relationship between the workers and the general public

Ensure plans and schedules are adhered to by regular inspection and quality control

Trains and develops the workforce to meet new challenge

2. Our society does not take the contributions of the construction industry very seriously. But it should, because without these contributions, this world would be a very bleak place. When you walk out of your office, home, or classroom today, just take a good look at the world around you. I want you to notice the houses, the churches, the hospitals, the shopping malls, the theatres, the baseball stadiums, the bridges, the streets, and even the cars driving around. None of these would exist without construction. There would be no cars or any other manufactured products because there would be no manufacturing plants—no Nike shoes, no McDonald's restaurants, and no iPhones. There would be no commerce, no transportation, and no manufacturing. Progress and construction go hand in hand—we can't have one without the other. Our society, our economy, and our culture are all dependent upon the construction industry. So, the next time you hear someone complaining about construction workers stirring up dust at the intersection or delaying their trip to work in the morning, I hope that you will take the time to point out what our world would be like without construction.

3. Most construction industry professionals acknowledge that increased adoption of technology is in their future. Yet many still resist committing their time or money, and others invest sporadically, hoping to see results by using tech for tech's sake. Improved project outcomes can only occur through understanding the most significant of the individual applications and devices that are currently available, and realising how those technologies are already synergistically working together and giving rise to emergent processes.

These processes will likely supplant many of the standalone systems that now dominate the tech landscape and will represent the new normal for project execution in the not-so-distant future. While technology can improve the design and construction process, implementation of technology must be part of a broader strategic platform.

Perhaps the most widely adopted of all new technologies are mobile devices. With their easy-to-use apps, they allow workers to access, document, share and edit important project information even while on the job-site. Heavy-duty devices made specifically for field work feature rugged construction, screens that are better lit for viewing in bright daylight or poor weather conditions, and industry-specific components such as barcode scanners and radio-frequency identification readers (both of which can help track shipments, equipment and materials). It's widely believed that the future of mobile will be to dispense with devices entirely. Wearable gear probably represents the next "big thing," a stopping point along the way as hardware developers pursue the elusive goal of achieving truly invisible ways to augment reality.

GPS tracking has been a boon for any company that manages an equipment fleet. GPS hardware installed in each vehicle communicates with a "home base" via satellite, enabling managers to see where their vehicles are in real time.

As with other technologies, future trends in GPS tracking likely involve greater interconnectedness with other systems. Fleet tracking software and telematics systems can provide instant data about field conditions, as well as equipment conditions, and feeding that information into a central dashboard will improve operations.

Contractors already are utilising technology to monitor equipment usage, fuel usage and maintenance, and construction equipment manufacturers are investing more in intelligent machines. Building materials suppliers are leveraging the IoT for quality control, delivery and forecasting. But in the near future, big data is going to become a fabric uniting and transforming other technologies. This is because cloud-based software-as-a-service generates data patterns as a byproduct of their core tasks. The byproducts are known as data exhaust—but they are not mere pollution. For example, most people make use of sophisticated apps that display real-time traffic conditions by crowd-sourcing data from cell phone signals and sensors on vehicles and roadways. A similar type of data analysis will be used on the construction site to assess real-time conditions there. Data exhaust can be used to improve construction activities ranging from supply chains to safety. Experts anticipate a move away from proprietary products and toward open source software to support this connectedness. In addition, data from the IoT can feed into business intelligence tools and enterprise resource planning systems to help companies better monitor and manage their business.