



ENGINEERING PRACTICES IN THE POST -PANDEMIC ERA: THE CHALLENGES, PROSPECT AND IMPACT REDUCTION.

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ABSTRACT

This study assessed engineering practices in the post pandemic Era and its impacts on engineering practices, Challenges during engineering practices, the post-Pandemic Era, prospect in the post-pandemic Era, and its impact reduction.

Key words: - Engineering practices, post-pandemic Era, challenges, prospect, and impact reduction.

INTRODUCTION

The novel corona virus diseases 2019 (COVID 19) was first identified in Wuhan china in December 2019, which has rapidly spread to almost every region of the world. The disease is caused by a new and severe type of Corona virus known as severe acute respiratory syndrome corona virus 2(SARS-COV-2). The infection has no immediate treatment and vaccine, and it has according to world health organization (Who 2020) becomes a worldwide pandemic, causing significant morbidity and mortality. There are 1,603,428 confirmed cases 356,440 recoveries from the illness and 95,714 deaths. Worldwide as of April 9th, 2020. (World meters 2020 on February 27th). An Italian citizen became the index case for COVID-19 in Nigeria, and as at April 9, 2020, there were 288 laboratory confirmed cases of COVID- 19 in Nigeria with 51 discharge and 7 deaths Nigeria centre for Disease control, NCDC, 2020. To prevent further spread of the Virus, civil societies and government agencies embarked on enlightenment campaigns for good hygiene and social distancing, Temperature screening was conducted at airports and those returning from countries with numerous confirmed causes of COVID-19 were implored to self isolate.

The NCDC in association with state governments also began tracing and tracking of possible victims and their contracts on March 18, 2020, the Lagos state government suspended all gatherings above fifty people for four weeks and ordered all lower and middle level public officers to stay at home (Ewodege

2020). Similarly, the Federal government, on March, 30, 2020 introduced various containment strategies such as closing of the national borders and airspace, school, worship centers and other public places, canceling of mass gathering events and placing the federal capital Territory, Lagos and Ogun state on lock down for an initial period of fourteen days (radio Nigeria, 2020) COVID-19 testing laboratories were set up in Lagos, Abuja and Irrua in Edo state, while state governments opened isolation centers and imposed down to dust curfews in their territories.

MATERIALS AND METHODS

The materials and methods used for this study were through available literatures on the topic under discussion. Efforts were made to compare the literatures with the present situation of pandemic and engineering practices in the country. A visit to some engineering project sites under execution were embarked on during the pandemic periods in the country, which also provided a useful information on the topic under consideration.

DISCUSSION

Engineering practice is any professional service or creative work requiring engineering Education, training and experience, and the application of Engineering data to engineering activities that potentially impact individual life and society as a whole.

What Engineering practices and services entails

- Research:- Advance field
- Development;- Laboratory to market
- Testing:- verify, Integrity, reliability and quality.
- Design;- Development for manufacturing and construction
- Analysis:- use mathematics models
- Construction Build
- Systems:- Integrate components to produce functioning product
- Facility and plant operation
- Management
- Technical support
- Customer support

Challenges of Engineering practices during the pandemic Era



The pandemic challenged the cure of what makes Engineering practices to be lucrative and exciting for engineering professions. Covid 19 has actually changed engineering practices.

Impact of Covid 19 pandemic

- Busy streets full of people are now deserted reducing the need for maintenance of Transportation system leading to job cut.
- It has massively disrupted business in a short period of time, making people to extend their capital on survival ventures and expenditure, savings were depleted leading to reduction in demand for engineering services
- Industrial production fell in the first two months of the outbreak leading to job cut in the china production sector e. g china fell by 13.5% lockdown across the world impacted the life of daily workers and artisans who are supporting worker in the Engineering industries, curliness, factories, shops, restaurants and other business have suffered greatest economics shocks.
- Many countries are heading for very sudden and unprecedented recession, leading to internal and external borrowing, contractors are not paid, and local debt is soaring.
- Global reduction in demand for engineering services and products due to effect of pandemic on economics around the world, leading to downsizing of workers.
- Oil price have plummeted resulting in unavailability of fund to pay for contracts executed

The Post Pandemic Era

It is important to know that the pandemic is nearby over. We have a situation where the virus has spread to all countries. People of all ages have developed immunity against the virus and the curve of infection is flattened and then declining. There is no meaningful spread of the outbreak as it has been contained and can be easily managed like cell other epidemics. The outbreak will soon become season.

Prospects in the Post Pandemic era

- (1) It should be noted that Business that are cloud computing based will not buckle under the pressure of the pandemic.
- (2) Artificial intelligence will be needed to enhance the resilience of supply chain.

- (3) Agility swift response) Scalability (the capacity to be changed in size or scale) and automation will be the way to go in post pandemic era.
- (4) Investment in public and private business in areas that meet the basic needs of life like housing, food production (processing) and nothing and medical related businesses
- (5) Value addition in the area of food chain supply and agro- businesses will be highly needed and available.
- (6) Multi- business investment and complementary goods supply (two goods) that are used together will be needed to meet the needs of the masses.

Impact Reduction in the Post- Pandemic Era

Most countries have lifted lockdowns and manufacturing have started returning. The airlines are opening for bookings, and people are getting back to work. Economics have warned that it will take nearly half a decade or a decade to restore the world economy to pre pandemic levels

CONCLUSION

Engineering practices in the post- pandemic era will take a new dimension. Business also in the post- pandemic era will be different, and its continuity will be the foremost importance to engineers of all Engineering professions. New addition and categorization for critical and essential business will take place with diversification. Professional collaboration will be needed in different fields of Engineering.

RECOMMENDATION

It is recommended to all practicing Engineers to prioritize their spending and reinforced their business and financial position. They should look ahead for investment in business that well serves the work from home. They should support their staff and workforce as much as possible, renegotiate contracts, if need be for financial support.

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