Digital reformation in the wake of the novel corona virus pandemic

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Abstract

21st century is the century of digitalization. Mankind has achieved significant breakthroughs in the field of technology, modern devices and telecommunication which has able to bring the world closer and together. During last few months the world has been dramatically changed due to a small incident in just one area of a big country and now that epidemic has spread to almost all the countries of the world in just a matter of few months. The situation has become practically worse in developed countries and has disrupted the lives of ordinary citizens. Digitization has been a boon in these harsh times by providing affordable and alternative solutions to the world to keep up the pace in moving forward.

Key words: digitalization, Corona Virus, pandemic, business, globalization

I. Introduction

A secluded incident in Wuhan, then an eruption, and now a pandemic that has sent the world into a lockdown. The novel Corona Virus has brought our existence as we know it to a standstill: schools have been shut down, events called off, restrictions imposed on travel and nearly all companies are prompting their employees to work from home. As the world scrambles to contain the spread of the virus, the crisis has raised a stern issue on our preparation to tackle such disaster. Besides the health risks imposed, the virus has created complete mayhem, causing economies to spiral slowly into a plummet. Trade and commerce have taken a massive hit, the supply chain has been severely affected, and business growth has been brought to a standstill. Right from travel to automotive, just about every industry is bearing the impact of the pandemic at present.

As we're fighting the corona virus wave, amidst all the confusion, the crisis has given us an opportunity to reorganize, introspect and reassess several aspects of everyday life: work, education, entertainment. On the business front, with social distancing being imposed and work from home being made mandatory by even those organizations that were against the idea of a distributed labor force, many have woken up to the realization that digital transformation is as crucial as ever and are probing into their Business Continuity Plans. The result will be a shift in the way organizations manage their operations. Even organizations that have so far relied on old-fashioned systems will experience the power of digitalization and those that are already digital-ready will find it comparatively easier to

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sustain the hysteria. Cloud, video conferencing, document sharing, online meets, collaborative tools, chats, and more; like it or not, digital is what's keeping operations running amidst the pandemonium.

- **Going Digital – The need of the hour**

The world is going digital, and when we talk about digital business, it's about transforming the way you interact with your customers, how your employees do their jobs or how it fosters innovation, improves productivity and revenues. In this age, it's either 'Go Digital' or 'Go Home' and those who don't embrace it risk losing out on the tremendous benefits it provides and can fall behind. Besides the preparedness to take on a pandemic of any nature, it's time to update your business model and put digital transformation at the heart of your strategy:

- **Optimizes operations, reduces costs**

Haphazard workflows and overheads associated with using outdated solutions can be eliminated by going digital. It can consolidate, improve business workflows, eliminate errors, streamline operations and make a considerable impact on your business efficiency. Better efficiency can cut down your operational costs.

- **Improves data collection**

Digitalization can transform the way you collect and manage data. No more paper forms or files, as going digital will help you eliminate the inefficacy of handing data manually and help you centralize, secure, and make information easily accessible as needed.

- **Analytics and decision making**

Data is knowledge, and the more knowledge you have, the better your decisions. Digitalization makes data manageable and organized, allowing you to derive actionable insights to help you steer your business in the right direction by making informed decisions.

- **Boosts productivity**

Think of the time it takes to fill out a form, and send it from person to person for approvals? What if this was all digitalized? From days, the process can be cut short to hours with automation. The more time you save, the more productive your employees, and the more tangible the outcome.

- **Makes communication and collaboration easier**

By opening up new communication channels and making it easy to access data, share information and interact with people from across the globe, you can foster greater collaboration, improve teamwork and make it possible for cross-functional teams to stay connected, irrespective of location.

- **Makes innovation possible**

Reports suggest that an average employee spends over 60% of their time carrying out non-crucial, redundant tasks! Using technological tools to make work easier, providing more information, encouraging interdepartmental collaboration and more, can allow your employees to work better and drive innovative thinking.

- **More customer-centric service**

Happy customers are a direct measure of your business success. Technology advancement has changed the way companies interact with their customers. It enables organizations to pay attention to their wants, understand their needs, deliver better customer service across all touch points, engage and serve customers quickly.

- **Enhances your work culture**

Digitalization brings in innumerable benefits, including a significant improvement in working conditions. It opens up new options such as flexible working hours, remote work, enhances learning opportunities and allows employees to stay connected from anywhere. It can also improve talent retention by boosting employee morale and satisfaction.

- **Prepared for anything**

Be it a natural calamity or a pandemic, digital transformation can bring in better preparedness to circumvent the impact and help the business operations sustain with the least interruption. The COVID-19 pandemic is a classic example of how digitalization has been helping employees of few organizations to work remotely with as much efficiency as in an office environment.

- **Keep pace with the competition**

Competing in a rapid-paced, dynamic business landscape can be quite challenging. But doing so requires you to shed your inhibitions and embrace digitalization and new technologies to keep up with the change. Refusing to 'move on' from legacy systems can make you fall behind your competitor, and risk losing out.

II. Benefits of digitalization in this hour

- **Development of an n-COVID-19 vaccine**

In these times when the world has halted, science and technology is working day and night for the development of a vaccine for it. Scientists in research labs all over the world are working tirelessly for its development at the earliest. To achieve such a big milestone, efforts of every country should be unified globally on a common platform by the aid of digital means. The efforts have proved fruitful in collaborating the research and data sharing

that various labs have started their clinical trials and a potent vaccine can be expected to arrive in the near months to come

- **Ability to Work from Home**

Even companies that were resistant to the concept of a distributed workforce have been forced to allow working from home, so work can still be done while taking precautions to halt the spread of the virus. According to a survey by Workhuman, only a third of people in the United States worked for home before the pandemic. Twitter and other large organizations encouraged their employees to work from home, and other companies such as Google and JPMorgan were building remote working policies in the event they needed to shift work home.

While the ability to work from home is a benefit many employees value, many companies lack the technology infrastructure structure to offer that capability without some sacrifices to "business as usual." However, one unexpected outcome of COVID-19 is that companies realize the benefits of fast-tracking digital transformation.

When many Chinese cities went under lockdown as COVID-19 spread, government and many companies encouraged millions to stay at home, which had them experiencing the joys and turmoil of working from home. Generally, Chinese companies were set up with appropriate technology to allow working from home, but many company cultures were not.

While some companies will eventually go back to rigid work-in-office policies, it's expected that some will realize the benefits to employees and that in fact, it can be done effectively. If nothing else, they will have valuable experience about what is needed and how to accommodate work-from-home needs in the future when it's required again due to another outbreak or other reasons.

- **Remote Learning**

As COVID-19 spread throughout countries, schools and universities began to turn to virtual learning options. Many universities decided to switch the rest of the semester's work to online learning only and some closed campuses to contain spread of the virus. While many universities had experience with virtual learning such as Harvard Business School Online and were better prepared for the shift, the majority of education organizations are not really set up for online classes.

There are some K-12 institutions that are going virtual, leaving teachers and administrators to ensure that all kids have access to the technology and tools they need to keep learning from home. The transition to digital education is certainly disruptive as it wasn't planned for in the timeline the corona virus dictated, but the educators and educational institutions will be better prepared in the future.

In China, New Oriental Educations & Technology Group and interactive streaming platform Agora.io collaborated to quickly get digital platforms running in China under a tight timeline so education could continue as soon as possible.

In India also, many private schools have started online classes on various digital platforms and as the examinations in all the higher education instructions are pending, the apex body, the University Grant Commission is preparing to instruct all the universities of the country to undertake examinations by digital means provided the digital infrastructure and resources with colleges and students.

- **Events Going Virtual**

Along with many in-person conferences being canceled worldwide in response to the COVID-19 outbreak, some are switching them to be virtual events. The first conference to cancel due to safety concerns was Mobile World Congress, the annual gathering of electronics makers. Google Cloud Next '20 became Digital Connect and promised that what once was a three-day conference to be a "free, global, digital-first, multi-day event" that would use the Next '20 content. Collison, the fastest-growing tech conference in North America, was another conference that turned to virtual as Collison from Home—the in-person event got postponed to June 2021. I am currently making arrangements to film my keynote for the SAS Global Forum, which has gone virtual because of the coronavirus, so that people can watch it virtually.

Conferences are a trillion-dollar industry and have been a critical way to exchange ideas and build professional relationships. Some companies are trying to bridge the gap between in-person events and virtual ones with platforms that combines video, networking, and more to try to capture the benefits of networking at an in-person event and the content and tech of virtual tools.

The virus outbreak has pushed conference organizers and business owners to think outside the box to provide compelling alternative options in the interest of public safety. This push could also result in innovations for the future with how people meet and interact better virtually.

- **Technology**

Remote working—and learning—is easier for all with cloud meeting and team collaboration tools such as Tencent's WeChat Work or Alibaba-owned DingTalk. In response to the COVID-19 pandemic, many technology companies are rolling out tools that can support companies and organizations when going remote for extended trial periods or for lower fees. Here are a few:

1. Google is allowing free access to advanced features that normally have a fee every month for Hangouts Meet to all G Suite and G Suite Education customers for several months.

2. Microsoft offered a free six-month trial of its top tier of Microsoft Teams to enable schools, hospitals, and businesses in China to keep operating even with the restrictions of corona virus.

3. U.S.-based video-conferencing provider Zoom saw its stock price rise during the crisis; clearly people are seeing the value of remote-working tools. Zoom lifted the 40-minute limit from its free Basic plan for China when corona virus hit the country. Doctors in China from more than 1,000 hospitals used the service for online consultations.

4. LogMeIn is offering healthcare providers, educational institutions, non-profit organizations access to its video conferencing tools, including GoToMeeting and GoToWebinar.

5. Cisco is fortifying its Webex tool to properly support companies during the corona virus in the 44 countries its available in, including offering 24/7 assistance for businesses using the tool.

- **Research conferences, seminars and workshops**

The workshops and conferences for research innovation and inventions which are a regular part of the academic calendar are also going online. There can never be a stop on learning and education is a free flowing stream which has embraced digitalization in these times when physical and social gatherings have been forbidden. The global partnership has embraced collaboration with all the different stake holders from every corner of the world.

Then and Now:

When SARS broke out in the year 2002, it took over a year merely to sequence the genome of the virus. This time, it barely took a month. We've certainly come a long way; be it our detection methods, testing or crisis management. From using AI for prediction to analytics to track the virus spread to robots for contact-less treatment, we're certainly better prepared and smarter than before, but it's not enough. With economies on the brink of collapse, the pandemic forces us once again to rethink governance, healthcare, judicious use of technology, innovation and of course, business operations.

III. Precautions to be taken while going digital

- **Working remotely — and securely**

Cyber security is a human problem: the person at the screen or keyboard is always the weakest point in any technical system. Attackers will use a set of techniques — broadly described as social engineering — to trick us into divulging sensitive information.

Just as we have learned to reduce the risk of the corona virus through social distancing measures and proper hand washing, we will need to develop good security habits to reduce these security risks. After all, we are in the midst of the largest work-from-home experiment in history.

Microsoft's cloud services reported a 775 per cent increase in demand across their platforms when strict social isolation measures were put in place.

This situation also presents opportunities for cybercriminals. Attackers have real opportunities to take advantage of the changes in our habits as we transition to working remotely, but there are several best practices that will mitigate the increased risks. The Electronic Frontier Foundation has published some useful guidelines for working remotely.

- **Security habits**

Phishing campaigns use email or instant messaging to coerce a user into inadvertently helping an attacker by clicking a misdirected link, downloading a malicious file or entering log-in credentials.

To thwart such attempts, click on the sender's name and confirm that their name matches the email that you have on record. If you are clicking a link for work purposes, check the link address before you click by hovering over it. Most browsers will display the address on the bottom left corner. You can test this feature by hovering over this link to example.com.

Rather than sending files over email, use a shared file system set up by your employer, such as DropBox, Box or OneDrive. If you have any questions about a file or a link, check with a co-worker or your IT security department.

Avoid opening attachments from email or messaging services. Some of these are known to have experienced security breaches: for example, WhatsApp, Messenger or iMessage.

Your contact information may be easily available online and the speed of instant messaging communications allows for rapid, unintended clicks to compromise your system, often by uploading malware. Slow down the pace of communications to ensure that the people we communicate with are authentic. Be cautious and reflect on the legitimacy of all your communications.

- **Protecting health-care organizations**

A ransom ware attack uses a piece of software that locks legitimate users out of a computer system by encrypting files and demands payment to regain access to the affected system. At present, operators of two large ransom ware tools, Maze and DoppelPaymer, have promised to reduce the impact of their scams on critical health-care infrastructure.

Public health organizations and national media from around the world have been asked to entertain worst-case scenarios as a result of COVID-19. An example of a worst-case cyber security situation during a pandemic is a ransom ware attack against hospitals. The U.S. Department of Health and Human Services published a report in 2016 on ransom ware attacks to prepare health-care workers.

Ransom ware has been an increasing problem before COVID-19 and the current emergency will only exacerbate the situation.

There has been a recent trend toward using ransom ware in smaller municipalities throughout France and in larger metropolitan centers like Johannesburg, South Africa, and Baltimore, Md.,, Albany, N.Y., and Atlanta, Ga., in the U.S.

Ransom ware has been used against organizations like hospitals and airports, most notably the 2017 WannaCry ransom ware attack of the National Health Service in the United Kingdom. Canada has also seen similar increases in ransom ware attacks.

Hospitals and other critical infrastructure are at risk of being targeted during the peak of the crisis, where government and public health officials will be exhausted by constant communications. For example, a phishing campaign directed against hospital or public health officials promising personal protective equipment has the potential to cripple some portion of the digital infrastructure that supports our health-care system.

Should a ransom ware attack happen in such a situation, it would be logical for an administrator to simply pay a ransom and continue saving lives, which would only encourage future attacks.

- **Increasing vigilance**

We must be vigilant not to spread COVID-19, and we also need vigilance in protecting our digital infrastructure. All institutions, including hospitals and public health organizations, should have recent back-ups that would allow them to rapidly restore services in the event of a ransom ware attack.

COVID-19 represents an opportunity to build better digital infrastructure that includes multiple points of authentication, such as two-factor authentication through text message or by mobile app, by default. This more resilient digital infrastructure should also include systems that do not trust each other, so attackers are unable to move horizontally through organizational infrastructure.

While this is no simple task, so-called "zero trust" architecture and multi-factor authentication will increasingly become standard practice throughout institutions, both large and small. We must be ready to have a public conversation about the legal, technical and personal dimensions of the cyber security threats we will face during the COVID-19 pandemic, but we must first be equipped with the questions and issues that emerge from working online in the coming years.

IV. Conclusion

"वसुधैव कुटुम्बकम" – i.e. **"The world is a family"** has long been the belief of ancient Indian literature as depicted in various Hindu holy books in Sanskrit language which has a practical glimpse in this age today and if that's true then digitalization is the key that will unite the world. All the countries were busy in allocating maximum of their financial resources on defense and were being prepared for a war like situation were totally contradicted by a small micro organism that has made the mankind forget about differences in all races, tribes and geographical disparities, and digital networks have proved to be a blessing to mankind in achieving this unity. This should continue in the post pandemic era too which will help countries revive again from the jolt suffered.

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