How COVID-19 is Pushing INDUSTRIES towards the DIGITAL World

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Abstract— **The world is changing fast. The COVID-19 crisis has brought about years of change in the way companies in all sectors and regions do business. IT has pushed companies over the technology and transformed business forever. During the pandemic, consumers have moved towards online channels and companies and industries have responded in same direction. There is a rapid shift toward interacting with customers through digital channels. To stay competitive in this new business and economic environment requires new strategies and practices**.

INTRODUCTION

Technology companies are at the forefront of innovation, creating products and solutions that enable digital transformation across different industries. Some positive transformations will be driven by technology companies looking to break new ground and compete for consumers among the millions of social and commercial interactions that will now be permanently online. Videoconferencing platforms, for instance, have emerged as the go-to technology Besides significantly changing consumer behavior and disrupting market dynamics, the lockdowns and social distancing have caused component shortages due to supply chain disruptions. This has impacted business operations across product engineering, sales, customer service and manufacturing.

RISKS RELATED TO COVID -19 OUTBREAK

1. *Data Sharing:* The COVID-19 pandemic will likely create a new battlefield, one that will be defined by the datasets generated by the fusion of our biological and digital worlds. Before the coronavirus pandemic struck, researchers were often cautious about sharing their data, But the pandemic has prompted a new and more urgent interest in sharing and mining existing data, and in pooling resources

2. *Phishing scams:* COVID19 has impacted the global cyber risk in many ways. The world's attention was fixed firmly on the public health crisis and adapting to the COVID-19 'new normal', cyber criminals took their opportunities to pounce. Throughout the pandemic, there has been an uptick in phishing scams – a fraudulent email intended to have the victim either wire funds directly or open a URL/attachment that installs malicious software on the victim's computer. This type of attack has gained even more popularity during COVID-19 due to remote work and the

organizational changes.

3. *Cyber Crimes:* The COVID-19 outbreak will also exacerbate "petty" cyber-crimes. These are minor cyber incidences; those that may not pose systemic national security threats but will affect the financial and social lives of individuals dramatically.

4. *Multidimensional socio-economic challenges:* The fourth risk is of individuals being permanently left behind as the process of digitalization continues to accelerate. Inequality has been the defining political zeitgeist of our generation – one that digital technologies have often accentuated. In countries without full or robust access to the internet, citizens are suffering from multidimensional socio-economic challenges as the pandemic snatches away their access to essential public goods.

WAYS THE COVID 19 WILL CHANGE THE INDUSTRY

No matter where you live, the coronavirus (COVID19) is likely forcing changes to your everyday life. The same is applicable for business, in this process, the global economy has ground to halt

1. *Stress Testing :* COVID 19 forced enormous adjustments in IT operations in a short period. Network -wide stress testing will become standard procedure for most of the business and IT professionals that manage their network. WAN-side services should handle a completed traffic that many businesses have now been forced to think.

2. *Flexibility will Become Standardized:* Even before the coronavirus crisis, businesses of all kinds had started to embrace things like flexible work schedules and remote work policies to provide a better employee experience. After the coronavirus crisis businesses have undergone many changes, business meetings have gone virtual, work -from-home have gone new normal. The speed and demand of transitioning many users to full time remote workers is unprecedented more businesses will rush to adopt standardized IT solutions to support bring -your-own-device (BYOD) and other flexible technology initiatives.

3. *Automation Technology will Boom :* Now the need has risen to reduce human contact during day to day operations Therefore, coronavirus pandemic has

pushed the world into automation boom. However, now to control a situation like COVID-19,

- AI-based devices like temperature screening terminals and smart video analytics can be used to check and control the crowd for elevated body temperature, absence of face covering, etc.
- Smart video analytics to ensure social distancing both public and private organizations must evolve their safety standards
- Smart access control devices to prevent local outbreak

4. *Biometric will go Tocuchless:* COVID 19 has sped up much of the digital transformation already under development for commerce, online and within corporate workplaces. As some of the contactless methods are being already developed and used

- With the pandemic the transformation to contactless payments was gradually developing and became accelerated. This is going to be a permanent shift. It is not something that people are transitioning to temporarily
- Contact-free facial and iris detection will see a surge in interest. The techniques are commonly used by law enforcement, border control and at airports.
- Biometrical devices will also be the keys of entry in corporate places, commercial buildings, residential complexes. UnifyID is the startup company is developing some of the biometric authenticating technologies that will drive that new safety vision.
- In Retail keeping in mind the customer satisfaction the process will be more personalized procedure. For instance, as soon the customer walk through the store the customer will be greeted by alerts for special sales and product information base on previous buying. So, we are also seeing a natural shift from self-checkout to no checkout based on shelf sensors, and data tracking with store app on the customer's phone.
- Consumers will enjoy shopping with no relying on payments with four-digit-pin instead, consumers will use motion sensors in smartphone to authenticate people by their walking behavior and other biometric signals.

5. *Supply Chains :* Covid19 has impacted supply chains around the world.The manufactures that depends on labors have been disrupted because of social distancing . For other manufacturers, the reason could be the ablity to have their product delivered.For example transportaion routes risks. Producers and distributers are facing increased demand for consumer packaged goods such as food, beverages, and cleaning products due to shoppers panic-buying in bulk. The majority of companies did not learn the lessons of the natural disasters of the last decade and, as a result, suffered severe supply disruptions when the Covid-19 pandemic struck. To make sure the same thing doesn't happen the next time around, they should study their supply chains in depth, which includes identifying alternate sources of items; changing the way they

assess the performance of their procurement function to include revenue assurance and not just cost savings; and the pace of automation will pick up .There is need to revist the infrastructure on the timeley basis and help the rail and raod deals with the new demand.This pandemic has also shown us that more prodcution should be done locally to ensure the togh times.

6. *Drone Delivery Gets Vloser to Reality:* Drones are a vital resource to stop the coronavirus outbreak. The pandemic-driven digital shift is a ready-made moment for new delivery systems like drones .The focus will first be on lifesaving uses, such as delivering medicine and virus test kits which don't weigh much and later step will be delivery of lightweight household items. More drones will be sold for surveillance and monitoring by police. Federal, state, and local officials are asking how drones can be used in this time of crisis, Rather than speculate, it is incumbent upon our industry to conduct operationally-based exercises that produce factual data and lessons learned to ensure we can respond safely, effectively and efficiently when called upon. Data collected now will impact our capabilities beyond the COVID-19 outbreak we are currently facing."

7. *Crossing the Digital Divide:* The digital divide is a gap created between different demographics of people in their ability to understand, access and effectively use technology. The digital divide within all advanced and developing economies has been further exposed by the pandemic. More federal funding will go to Wi-Fi hotspots for at-home education. Advocates are pressing the Federal Communications Comm. to free up funding used to connect schools to the internet for connecting kids at home and elsewhere. Following are further 4 ways to close the gap

- Never stop the urge to learn more -Actively learn digital literacy
- Share your knowledge -Teach digital literacy to others, and develop your own curriculum
    - Evaluate your means of internet and think of the ways to improve it
    - Think of ways to integrate technology and digital literacy into your everyday routine

8. *Entertainment& Adversting:* COVID-19 has created major changes in Media and Advertising Industry. There is a growing demand of entertainment because of the social distancing entire population across the world have been confined to their homes. Broadcasters, OTT providers like Netflix, Disney are seeing increased viewers numbers, Live streaming providers and social media platforms have seen increased viewership. On the other hand, advertising revenues have declined because of substantial job cuts that lead to dramatic decrease in sales in non- essential goods. The COVID-19 has forced immediate, far-reaching lifestyle shifts for consumers. In fact, it's unlikely that consumers' lives will return to normal soon. With new developments around COVID-19

arising daily, advertisers have a real opportunity to make a difference and ensure people can cope with this, while also laying the groundwork for their companies to come out stronger.

AN ACCELRATION OF THE DIGITALIZATION:

Digital transformation is more of a journey rather than a single leap from paper-based to digital technology in experiences, workforce, and operations. Learning in terms of process of making changes to business and how to manage the change on the organization level will be critical going forward, since the pace of change will not likely to slow down. The digital capabilities are increasing all fronts. And even the uneducated people are now becoming digital savvy. The Experts estimated that COVID19 could be a window of opportunity to drive digital transformation in sectors in which it had not been a focus in recent decades. Digital initiatives may need to be reprioritized based on relevance in the current environment. New problems and opportunities may come to light with greater urgency. However, a true digital capability map can help companies get their arms around the entire set of digital business capabilities. It can be a foundational tool to assess the current state, plot the target state, and leverage the capabilities to evolve to the desired target state. The key is continuing to experiment and innovate with digital solutions front and center. With the right approach, businesses can come out of the fray stronger, more agile, and more customer-centric than before.

Consider the following representation how Covid-19 pushed the public health sector towards the interconnected digital technologies. How the healthcare industry and their customer interacting with each other where organizations are making sure to avoid as much as possible human interaction.
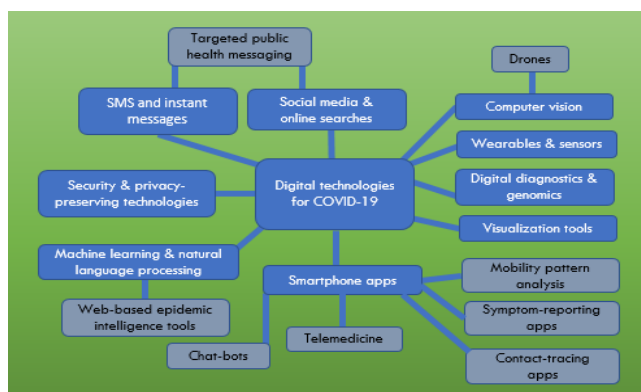

Fig.1 Technology insertion and utilization in Healthcare Industry

KEY TAKEAWAYS FROM THESE DIGITAL TRANSFORMATION STATISTICS

1. *Digital transformation is a must, but it is also a competitive advantage:* This is because, despite the necessity of using technology to transform their business, most companies have yet to complete their digital transformation plans or formulate an effective strategy that scales.

2. *CIOs are the proprietors of digital transformation efforts, but they're not alone*: This means your business probably needs a dedicated leader for digital strategy, but that doesn't mean they should do the job on their own. Getting buy-in, support, and help from other leaders or employees – and ensuring a common understanding of digital efforts – is vital.

3. *Differentiate between modernization/optimization and transformation:* Modernizing your business processes is a big advantage, but that's not all digital transformation is. Executives should differentiate between "tactical digital investments" and "forward-looking investments to build revenue-generating digital products."

4. *Think hard about your best path of action.:* For example, define the desirable future of your business without concerning yourself with the present. This is a recommendation based on Gartner's findings about organizations that progress faster to a business model change by not doing it step-by-step. And, of course, as is evident from the stats, prepare to invest a generous chunk of your budget to your digital transformation efforts.

5. *Be customer-centric in your efforts:* Digital transformation goals can be about your internal processes and productivity. But, the ultimate purpose is to be able to connect with and engage your customers. Accenture suggests in its 2020 Technology Vision report, you can redesign the digital experiences you offer to turn passive audiences into active participants and co-creators of their relationship with your brand (e.g. by taking advantage of AI, VR, IoT).

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