LEVERAGING COMPUTER TECHNOLOGY TO CREATE SAFE VIRTUAL ENVIRONMENTS IN THE AGE OF COVID-19: THE CASE OF TWITTER INC.

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Leveraging Computer Technology to Create Safe Virtual Environments in the Age of COVID-19:

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The current coronavirus pandemic has had devastating impacts. As of 7th October 2020, over 200,000 Americans have lost their lives with millions infected with the virus (Linnane, 2020). Globally, at least one million deaths and over 30 million cases of the disease have been reported. While the human health impact of the pandemic has received much of the attention, there is a need to explore how firms have responded to this crisis. Across the world, many companies have been forced to suspend operations and fears are now being raised that unless urgent interventions are implemented, the globe is staring at a crippling economic crisis (Mandel & Veetil, 2020). Fortunately, there are some firms that have demonstrated that by leveraging the power of technology, it is possible to survive and even thrive despite the pandemic. Twitter is one such company. This company has spearheaded the adoption of various technologies and solutions that allow employees to work safely in virtual environments without compromising productivity and performance. An evaluation of Twitter’s strategy reveals that other firms can also benefit from the technologies and approaches that Twitter has in place. (Kelly, J 2020) However, to witness the full advantage of virtual environments, the companies must be wary of the threats and challenges that Twitter’s technologies and strategies pose.

**Virtual Environments**

For this case study, virtual environments have been selected as the technology to be reviewed. The choice of this technology was informed primarily by the role that it is playing in helping firms to survive the challenges that the coronavirus pandemic has generated. There is ample evidence showing that an increasing number of companies are turning to virtual environments as part of their efforts to remain operational while protecting their employees. For example, according to Sidpra et al. (2020), companies have embraced technologies that allow them to create virtual environments where employees drawn from multiple disciplines are able to collaborate on projects in a safe yet efficient fashion. In particular, Sidpra et al. (2020) note that these technologies have allowed companies to hold virtual meetings where employees are able to deliberate on vital subjects. Schools have also benefited immensely from the virtual environments. For instance, reporting for the World Economic Forum, Li and Lalani (2020) noted that these environments are changing how teachers engage with their students. While the virtual environments cannot replace face-to-face interactions among teachers and students, they are facilitating effective learning. Given that virtual environments are redefining how organizations operate in the new uncharted climate that the coronavirus has created, exploring these environments is certainly a worthwhile undertaking.

**Virtual Environments at Twitter**

As stated earlier, Twitter is one of the companies that have embraced virtual environments in response to the coronavirus pandemic. While these environments are crucial, it is helpful to begin the exploration with a look at Twitter’s overall management approach to the crisis. Keeping its employees safe is the company’s primary priority. For example, in early 2020, the company announced that it would require all of its employees to work remotely (Christie, 2020). This policy is part of the company’s broader campaign to insulate its operations and human resources from the damaging impacts of the pandemic. Twitter has set itself apart from other companies in the industry which seem more concerned about their profitability as opposed to taking all necessary measures to safeguard the wellbeing of their employees. In fact, Twitter has made it clear that its employees can work from their homes forever (Brownlee, 2020). Twitter’s approach clearly demonstrates that the company cherishes its staff.

The steps that Twitter to limit the pandemic’s impact on its operations extend beyond merely adopting the policy described above. The company has also made virtual environments a critical component of its systems and processes (Khabbaz, 2020). To support these environments, Twitter has adopted a number of technologies which are making it possible for employees to maintain their levels of productivity while working from the safety of their own homes. Among the technologies that the firm has made available to employees include virtual conferencing, cloud-based suites such as Office 365 which help employees to collaborate, and secure networking programs like virtual private networks (VPNs) (Chitkara, 2020). Thanks to these technologies, Twitter has managed to successfully launch virtual environments at a time when other companies that have attempted to develop similar environments are grappling with such challenges as hitches.

Communication tools are perhaps the most important technology that explains the success of Twitter’s virtual environment. In addition to the technologies discussed above. Twitter has also provided its employees with such programs as Zoom, Google Hangouts, and Slack (Kelly, 2020). These programs have been especially useful because they are not necessarily new. They have been in use for years and as a result, employees understand how they function. In essence, harnessing the power of the different technologies discussed here, Twitter has been able to establish a new culture that places emphasis on employee safety and efficiency. The company expects that as working in virtual environments becomes the new normal, it will witness a significant increase in the productivity and satisfaction levels of its employees (BBC, 2020).

**Benefits and Drawbacks of Virtual Environment Technologies**

The benefits that virtual environments offer are indeed significant. One of these benefits is concerned with safety (Kshirsagar et al., 2020). For example, as noted earlier, in implementing the virtual environments, Twitter was motivated by the need to keep its employees safe from the coronavirus. Thanks to the virtual environments, the employees are spared the need to have physical interactions which have been identified as among the factors that fan the spread of the pandemic. Another benefit that the virtual environments deliver is cost savings. Various experts have determined that companies that have been quick to institute these environments are incurring lower costs (Routley, 2020). The cost savings have primarily been occasioned by the fact that firms like Twitter are spending less on office space and related costs.

Productivity gains are another important benefit of virtual environments. According to experts, in firms where virtual environments have been incorporated into operations, workers tend to be more productive (OECD, 2020). It can be argued that the environments have created a climate of safety and comfort that has generated the productivity improvements that experts have observed. The fact that its employees are more productive could explain why Twitter has decided to make virtual environments a permanent feature of its systems (Bahlinger, 2020). Going forward, it is highly likely that other firms will emulate the example that Twitter has set.

While virtual environments are mostly beneficial, it is important to acknowledge that they have some drawbacks. Some of the shortcomings of this approach include limited social interactions, fatigue, and the difficulty of monitoring employee performance. For example, it is impossible for employees to enjoy the warmth of face-to-face conversations with their colleagues when interactions are mediated by the virtual environments. There is no indication that Twitter has experienced any of these problems. However, the firm should brace for these drawbacks now that it has made the virtual environments permanent.

It is fairly easy for Twitter to roll out the virtual environments in such markets as the US where advanced and reliable technologies are available. On the other hand, in markets that lack the resources that are needed, it is nearly impossible to create the virtual environments. As Mukhtar et al. (2020) observed, these environments mostly benefit individual with adequate access to the resources and tools needed to take full advantage of the virtual approach to work. It is reasonable to suppose that in such areas as Africa, Eastern Europe, South America and Southeast Asia where resources are scant, Twitter must have struggled to introduce the virtual environments.

**Achieving Greater Efficiency using Virtual Environments**

It is true that the virtual environment has transformed Twitter into a safer and more efficient organization. However, by implementing a number of best practices, the firm can leverage the environment to achieve even greater efficiency levels. Educating employees on the importance of online security is among these practices (Deloitte, 2020). For instance, in an earlier section, it was noted that to run its virtual environment, Twitter relies on such digital tools as Slack and Hangouts. While these programs have certainly been developed in accordance with stringent security protocols, it is difficult to rule out that there are vulnerabilities that can be exploited to carry out attacks. Providing the employees with all the resources that they need to leverage the full potential of the virtual environment is another best practice that Twitter should adopt if it is to achieve enhanced efficiency. In their discussion regarding how virtual environments are reshaping work, Guyot and Sawhill (2020) challenge companies to ensure that their employees have such resources as high-speed connectivity so as to achieve productivity standards. Creating channels that promote open and seamless communication is another strategy that promises to help Twitter to become more efficient as it further embraces the virtual environment. The following image illustrates the best practices and their contributions to improved efficiency:

Figure 1 Best practices for higher efficiency

**Threats, Security and Challenges**

Virtual environments are plagued by some threats and challenges that could hamper their adoption. Collaboration problems are among the challenges that Twitter needs to brace for. It has been observed with concern that many firms that have implemented virtual environments have struggled to create an atmosphere that allows for effective communication and collaboration (Deloitte, 2020a). For instance, it is not uncommon for employees working in virtual environments to complain of poor connections and interruptions. These problems make it nearly impossible for the employees to engage in smooth and productive conversations with colleagues. Therefore, if Twitter is to avoid the communication challenges that virtual environments create, it should spare no effort or expense in ensuring that its employees have all the resources and support that they need.

In addition to the communication problem addressed above, virtual environments have also been blamed for increasing the security threats to which companies are exposed. For instance, according to Casey (2020), as companies adopt these environments, employees have been forced to take individual responsibility over cybersecurity. Furthermore, Casey (2020) warns that such solutions as VPNs that companies like Twitter has offered their employees do not offer full protection against security risks. The fact that the virtual environments have made it difficult for smooth communication to occur has further heightened the challenges that the companies are grappling with. For Twitter’s employees to successfully respond to the different risks and challenges, robust communication strategies and processes must be in place. It is hereby recommended that Twitter should act swiftly in overhauling its communication frameworks to make them more compatible with the virtual environment and the reality of the coronavirus pandemic.

In conclusion, COVID-19 remains one of the most serious crises that businesses have faced in history. As a result of this pandemic, many businesses are facing financial challenges with some forced to shut down. However, in the midst of this crisis, there are some firms that have grown stronger by harnessing digital technologies. As has been made clear above, Twitter is one of the companies which have implemented virtual environments to withstand the problems that have resulted from the pandemic. It is true that the adoption of virtual environments has been fraught with challenges such as cybersecurity risks and poor communication. If Twitter is to overcome these problems, it needs to invest in improved communication, ensure that its employees are adequately resourced, and conduct training on security protocols that the employees can implement to eliminate the cybersecurity risks. With these measures in place, Twitter will certainly be well positioned to become more efficient.

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