

# Background Research Report

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SI 501 013 Contextual Inquiry and Consulting Foundations

ADMI

Oct/29/2021

## Cover Page

### Summary of Client’s mission

ADMI is a company with more than 40 years old, located in Ann Arbor, MI. It serves as the bridge between original equipment manufacturers (OEM) and dealers to provide transparent and efficient communication as well as support on inventory and logistics systems. Besides systems, ADMI also provides services including personnel training, data analytics, and management to help its partners to achieve better sales.

### Summary of Client’s Problem

To cope with Covid-19, ADMI is transforming into remote working to keep social distance between its employees. At present, ADMI is in a hybrid model, where only part of the company is operating remotely. To realize a comprehensive transition, ADMI needs analysis of its operations and software delivery cycle, so that it can “lift and shift” certain functions into cloud mode. ADMI is also interested in server co-location because it moves all servers and infrastructure out of the company so that everyone can work remotely through the cloud. ADMI also welcomes other hybrid models, but after transition, ADMI must be able to operate in an efficient, secure, and modern way to provide a better experience to its customers.

### Objectives

Like ADMI, there are many other companies eager to transform into a remote working model. This report aims at providing essential information about the remote working model. A deeper understanding of this model can help ADMI make better decisions during the “lift and shift” procedure. Background research will be done based on the experience and detail of other companies' transitions and discusses the critical problems in it. The pros and cons of the remote working model will be discussed.

**Word Count: 2359**

## **Introduction to Remote Working Model**

Since the outbreak of COVID-19, many companies have already transferred into a partial or full remote work model to keep the social distance between the employees without affecting the normal operation. The remote working model allows the employees to do their job without being physically present in the company, as a result, they can't take any advantage of the infrastructures which can only be accessed from the workplace. A typical example of the remote working model is "Working From Home" (WFH). In this model, employees don't need to go out but they can only use personal devices for work. Due to the pandemic, the transition to WFH happens so quickly and suddenly that millions of inexperienced employees around the world can't even have time to prepare themselves well. (Galanti et al. 1).

The research on WFH is extremely important for the remote working model because it's the commonest way for employers to work remotely. In addition, since there are so many employees working from home now, a large amount of related analysis and feedback is generated every second, which can be very useful for research. The pandemic and WFH model bring a lot of challenges to companies and employers, but they also provide them an opportunity to make a bold transition in their operating model. This is the turning point for companies and those with better adaptability will make the right decisions and "reinvent themselves by embracing pandemic-driven change", while others can only be eliminated by the times and the virus (Jost et al. 1).

WFH has shown supremacy and higher efficiency in certain aspects, so it may be adopted more widely after the pandemic. In addition, more remote working models, such as the mobile work model or small group work model may be tested, so that people can work with a better experience as well as high productivity.

This background research report will review works of literature about previous WFH cases during the pandemic. It will extract study, analysis, and feedback from these sources to generate a deeper understanding of the remote work model. The report will mainly focus on three aspects, including company management, technology and security, and well-being. Most problems with the remote work model are in these areas, and studying them will be quite helpful for the digital transition of ADMI.

## **Company Management**

One of the key responsibilities of the company managers is to keep improving the work model so that productivity and business can grow sustainably. WFH model, as one of the new digital work models, "has been among the most discussed topics of business leaders and management gurus" (Savić 1). Transforming the working model requires lots of human effort and a uniform thought, which is not preferable for people who hate unnecessary costs and problems. When everything is going well, only a few managers are willing to take any action and embrace the new working model. It's not until the outbreak of COVID-19 that everyone is motivated to think of how to deal with the challenges.

The first challenge faced by the companies is time, solidarity, and agility because there are many operations required by the major shift, including scheduling, reallocating resources, handing over work, and mental preparation (Jost et al 3). On average, organizations where everyone ranging from "remote workers, their supervisors, departmental and colleagues, and

other stakeholders” are clear about the priorities and goals, and acting with agile can respond to the challenge more efficiently (Craft 3). Thanks to a “flattened cross-functional structure focused on outcomes and speed-oriented operations”, telcos and banks not only reacted to the pandemic well but also make improvements in customer satisfaction. Such organizational structures perform well because they can reduce the number of management levels (Jost et al. 4-7). A flattened cross-functional structure is not necessary, but the leader should be able to directly interact with any employee and understand their feeling or trouble about the transition easily. When there is an emergency, a high-efficiency structure also enables the leader to quickly build and deploy a response team for specific functions without any extra communication cost. Although these sources provide various solutions, it may be hard to implement them, especially for big companies like international corporations. With more employees, more management is required. How to manage a lot of stuff well without a lack of agility bears a lot of thinking for company managers.

For a company with an accelerated decision-making capability and improved function structure, the next step is communication. Without efficient and open communication, the execution of decisions will dilute because low-level employees can’t understand it well. During WFH, people can’t meet face-to-face, but luckily remote meeting applications like Zoom and “workplace messaging apps (WMA) like Slack and Microsoft Teams”, (Oz and Crooks. 2), are “fully prepared for this situation” (Hern 2). For now, no matter for a big company or a small group of three members, these applications can be used in any scenario. They provide amazing features to help people get used to remote work models, including

- Stable instant video calling system with privacy protected.
- Rich interactions organized in topics, groups, and private messages.
- Flexible digital coordinating and scheduling system.
- Cloud service where users can access from various ends.
- Script and record for further review.

However, there are observations found that WMA is not good at transmitting complex information. The instant and rich interaction provided by WMA is limited, while it’s the preferable way to transmit complex information according to “Media richness theory.” (Oz and Crooks 2). For example, when two people are holding a meeting to make a video together, they can neither make the edition promptly nor view the results. It’ll be better for them to stay in one room and use one computer. In addition, employees may feel exhausted to organize extra meetings for trivial topics because these topics could usually be handled by face-to-face talk easily in the workplace. During the meetings, participants may feel uncomfortable or stressful as well. Some may feel the meeting routine very confusing while others may concern their appearance before the camera. Users must stay focused for a long time and keep checking the WMA actively in case that they miss some important information. Fortunately, based on a case study in a company called “InterSoft”, things will gradually be improved when people are used to it (Smite et al. 6). An agile company can always react well to problems. As time went on, “meeting’s structure became better” (Christoffersson and Djup 34), and the number decreased “because meetings’ value is reevaluated” (Conger 4).

Research studies help analyze the utility of WMA and remote meetings from two sides.

There is no doubt that nothing can replace the sense of reality in face-to-face communication, and WMA still has a lot of defects. Yet, many people and organizations are willing to pay tremendous efforts to improve the WMA's performance during remote working.

### **Technology and Security**

Technology, especially the Internet, plays an essential role in the WFH model because it brings remote employees together and provides access to their work. The distance between the company's server room and the remote workers' home brings lots of uncertainty, making it challenging for the company to provide reliable and stable infrastructures for remote work. Based on research, technical issues are everywhere, and the companies must pay a lot of effort and money for it.

During the pandemic, the number of cyber-attacks against companies has increased greatly, so it's suggested that companies should provide essential network security education, networking team, and Virtual Private Network (VPN) for their employees (Malecki 2-3). All these services will put an extra burden on the company's budget. VPN provides server-mediated forwarding that makes all employees look like one person located in the company using one IP address. The authentication system also prohibits access from other people. However, VPN is complicated for employers, and many employees, even with the IT support from the company, still find they can't figure it out. (Conger 2). They may be too annoyed because VPN even causes inconvenience to employees' normal life. In a case study at Facebook, "employees are banned from takeaway service because they're all placing orders through the company IP address" (Hern 2).

Given the unreliability and instability of VPN, people have different opinions on how to treat it. On the companies' side, typically they will build an IT team, specializing in providing tech support for their employers. A survey about what's the biggest help for transition to remote work proves that the IT team is the music to most employees' ears. "More than 45% of all respondents" hope that the company will be responsible for providing stable and reliable hardware and software service so that they don't need to worry about anything (Sull et al. 5). However, in another case studies at a software company "Microsoft", employers usually tend to fix these problems by themselves (Butler and Jaffe 1). There are more contradictions between the employees' and managers' understanding of technical support. Some employees consider it's the organization's responsibility of providing remote working equipment such as high-bandwidth Wi-Fi or office furniture, while senior executives may take home-office essentials for granted (Sull et al. 5).

The confidence in engineering skills may help relieve the burden of the company's IT team, but it may cause more problems for the company. Attackers can send emails with a computer virus or fraud to employers. If the employer tries to handle it without the specialized team's help, the virus may lead to a data breach or blackmail. To manage the risk, the company should often backup the data and have a recovery protocol when there's a security breach. When the worst thing happens, the company should call the police instead of paying the ransom, because it will probably be considered as an encouragement for the attackers (Malecki 3).

### **Well-Being**

During remote working, employees' well-being will probably be affected due to the

change of external environments. From companies' perspective, they want to provide enough support so that their employees can work as productively as local. However, due to the variation between the person as well as the limited control of the organization, and it's too ideal that everyone can be taken into thorough consideration.

There is no doubt that the remote work model provides employees with more flexibility and autonomy for the employees and it's greatly appreciated by them (Craft 4; Hern 2; Oz and Crooks. 3; Savić 3). On the one hand, such flexibility saves employees' time from commuting and they can stay with their family during work. The company of family can not only help them relief from stressful work but also enhance the connection between employees. When they can see the glances of the family life of colleagues, they tend to feel that they're more trusted by each other (Smite et al. 4). In addition, there are also fewer interruptions and distractions from other co-works during remote work, hence employees can "focus on their task to be more efficient and deliver higher productivity in their work" (Christoffersson and Djup 22). On the other hand, too much flexibility may affect employees' productivity, but it depends on an individual's self-discipline (Christoffersson and Djup 37; Savić 3). The company of family can be a distraction as well. Some employees feel challenging to maintain separation between work and home life (Craft 5). The flexibility restricts the organization's power as well. Some employees may work inattentively due to lack of supervision, others may feel unfair or neglected because the organization pays more attention to other employees than them (Craft 4). To ensure that employees are well-being at work, the organization must provide remote work education, so that employees know what challenges and problems they may face. It's also important for the organization to adjust the employee's positions according to their personalities. A company makes put more responsibility on more self-disciplined employees.

Mental health also needs to be emphasized during remote work. Even with the help of WMA, there are still a lot of workers who feel lonely and anxious during remote work. Some of them didn't foresee that they need to stay home so long, and they were eager to make face-to-face communication with each other. In some online meetings, some participants even "have trouble expressing themselves compared to a face-to-face meeting" (Christoffersson and Djup 38). Except for meetings, the companies' "habitual routines" requires special attention (Smite et al. 6). Usually, events like coffee chatting or game time can help employers get relaxed or improve morale. Without such routines or socialization, the employers may feel hollow inside or bored. On this issue, the company can hold a regular session for reflection and gratitude. Especially during the global crisis, there are a lot of things to be grateful for. The session will be very beneficial because it helps employees get relieved as well as build mutual understanding.

## **Summary**

Due to the pandemic, remote work and the WFH model are used more and more widely all over the world. In this report, we discussed the experience of companies who adopted the WFH model during the pandemic based on credible literature, and we compared and analyzed them in three aspects. Some of them have similar opinions while others contradict, but they all lead to constructive suggestions.

For the companies' management, an agile operation model needs to be established, and

the company should efficiently use WMA. For technology and security, any company should build a strong IT team to help employers. For precaution, the company also provides the employers with more education and often backup the data. For employers' well-being, the company needs to provide education and reflection so that employees can understand the situation better. It will also be helpful to adjust their work position based on their personalities.

There is no doubt that the remote work model has a bright future and it's still evolving. Previous experience and analysis will be quite helpful for the company to make further development or transition. It's also worth mentioning that every model has its pros and cons, and every company should play to the pros and take actions to manage the cons.

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