

Research Article

The Risk Management of COVID-19 Pandemic on the Delivery of Goods at PT. Sicepat Ekspres Indonesia

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Abstract.

This study aimed to identify risks to PT Sicepat Ekspres Indonesia during the COVID-19 pandemic. This study used quantitative and qualitative risk management methods. Data were taken from respondents using a questionnaire and distributed to respondents who were employees of PT Sicepat Ekspres Indonesia and service users of PT Sicepat Ekspres Indonesia during the COVID-19 pandemic. The steps in this research were to identify risk using a risk matrix, measure the threat obtained from respondents with 14 indicators, make a risk map in risk quadrants and determine the risk mitigation steps that the company can take. The result of the study proved that there is a quadrant I risk on the indicator, which is Work from Home (WFH) that reduced employee productivity (3,1.3,1), there are obstacles in supervision and communication of employees who do WFH (3,3.3), and Restrictions on Community Activities (PPKM) can hinder the delivery of goods (3,2.3,2).

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1. Introduction

In the current covid-19 pandemic, a number of local governments have enacted policies to minimize activities that involve large numbers of people, one of which is an appeal of entrepreneurs to close office activities and enforce WFH (Work from Home) and PPKM (Restrictions on Community Activities). Significant growth of orders in E-commerce also occurred in march 2020, to be exact after the corona virus (Covid-19) outbreak in Indonesia. The corona virus has become a new problem for the economy in countries affected by the virus, including Indonesia. The corona virus caused a significant impact on the economies.

PT Sicepat Ekspres Indonesia is one of the best companies engaged in the freight forwarding service in Indonesia. Delivery is carried out in many areas in Indonesia,

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according to the number of shipping request by the company, delivery of goods is done every day with different quantities. Coupled with the COVID-19 pandemic, the rate of delivery of goods has become higher than normal. Surviving in the midst of a pandemic requires a strong consistency in order to be competitive. Companies need risk management to find out new problems during this Covid-19 pandemic and avoid losses from the process of shipping goods. With the risk management of PT Sicepat Ekspres Indonesia, this company can understand better the dangers or impact that will arise if an error occurs. Risk management is directing the company to continue to run according to the rules set by the management. The application of the risk management also aims to identify risk in each of the company's activities, as well as to measure and overcome them [1]

The company delivers goods using pick-up trucks and operational employees who have done the selection process from the company first. The company uses different freight forwarders shipping products based on the destination city for delivery. In goods delivery activities, error often occurs, including lost during delivery, exchanged, damaged and delayed goods, transmission of covid-19 virus between employees, and wrong delivery destination address. Although previously the product to be sent have been checked before the goods leave the company, product that do not reach the consumers and misses the expected time will be a problem. It will result in losses for the company; therefore, it is necessary to analyze risk management from the company's point of view to handle unwanted things in the delivery of goods to the customer location

2. Literature Review

Based on [2], the risk of whether the corona virus can be transmitted through shipping packages is expressed by South Korea. Several package delivery service providers reported cases of COVID-19 from their warehouses. The Korea Centers for Disease Control and Prevention stated that risk of direct transmission of COVID-19 due to touching the package was actually very small. However, things are different if you followed it by touching your nose and mouth. Package delivery service providers have done their best to implement health and safety protocols to deal with COVID-19. However, the environmental conditions during the delivery process may not be fully controlled by the service provider.

2.1. Service Quality

According to [3] service is an activity that occurs in direct interaction between a person and another person or a machine, and provides customer satisfaction while in the KKBI it is explained that service is the thing, method, or result of the job of serving. In addition, according to [4] service is a dynamic condition related to products, services, human resources, process and the environment meeting or exceeding expectations.

Based on those definitions, it can be concluded that service is an action or activity that is given or offered by the company to customers in accordance with what they expect. The dimensions of service quality according to [5] consist of five main dimensions known as SERQUAL (Service Quality). It also has 5 main characteristics, they are: tangibility, reliability, responsiveness, assurance, empathy. The quality of service can determine customer satisfaction with good quality. Service quality is the main reason customers choose freight forwarding services.

2.2. Risk Management

According to [6], risk management is an attempt to identify, analyze, and control risks in every company activity with the aim of obtaining higher effectiveness and efficiency. In ISO:31000-2009 risk management is an organized activity carried out to direct and manage the organization in order to deal with risk. Therefore, it can be concluded that risk management is a systematic and logical, organized method that is carried out to direct, identify, monitor, establish solutions, report risks, and manage organizations within the company.

2.2.1. Framework and Hypothesis

1. **Risk context** : is a process to define basic parameters in risk management by providing an understanding of the internal and external environment in the application of risk management
2. **Risk identification** : is an effort to discover or identify risks that may arise in activities carried out by companies or individuals
3. **Risk measurement** : the attempt to identify whether a risk is considered as high or small. This is to understand the high low risk that the company encounters.

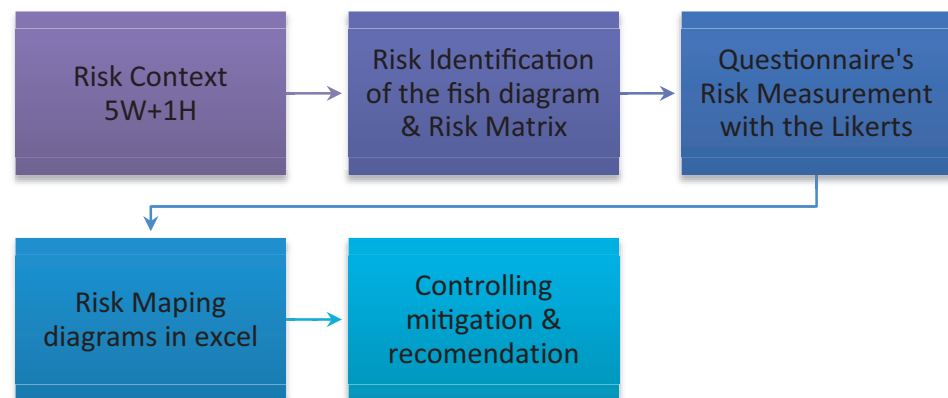


Figure 1: Conceptual Framework.

4. **Risk mapping** : Risk level identification, analysis, threat parameters, vulnerabilities, and capacities in the volatile region.

5. **Recommendation/mitigation** : This step is where a risk is recommended whether to be mitigated or eliminated/reduced. Mitigation activities are implemented at the appropriate risk level.

2.3. Research Method

This study used quantitative and qualitative risk management methods. Data is collected by identifying the risks that could arise in the field, then determining the risks and distributing questionnaires to employees and customers who used the services of PT Sicepat Ekspres Indonesia. This study used data management with the average results of the frequency and impact that had been distributed to respondents with a questionnaire. Data analysis was done through the analysis of Risk Mapping and Quadrants to find out the root of the problem that had the highest score. Finally, the suggestions for improvement based on mitigation analysis and risk management recommendations were made.

3. Discussion and Result

3.1. Risk Context

Determining the context of risk is closely related to setting goals, strategies, scope and other parameters related to the risk management process. This research was conducted in PT Sicepat Ekspres Indonesia (Jakarta) starting from June 2021- July 2021. This research started from observation and data collection to compiling the results of the analysis. This research is a way to find out, measure and analyse the level of risk that occurs in the company during the research period. Analysis of the level of risk of events was done such as the implementation of work that was not in accordance with health protocols, reduced employees' productivity, problems with delivery, changes in service, reduced operating hours, increased cost, decreased quality of supplier goods, less than optimal delivery, lack of monitoring of good status, and the lack of sterilization of operational sites.

3.2. Research Data Description

In this study, the authors conducted research in PT. Sicepat Ekspres Indonesia in June 2021. Due to limited data in the current pandemic, the authors determined the respondents' criteria for collection. Data related to the research topic.

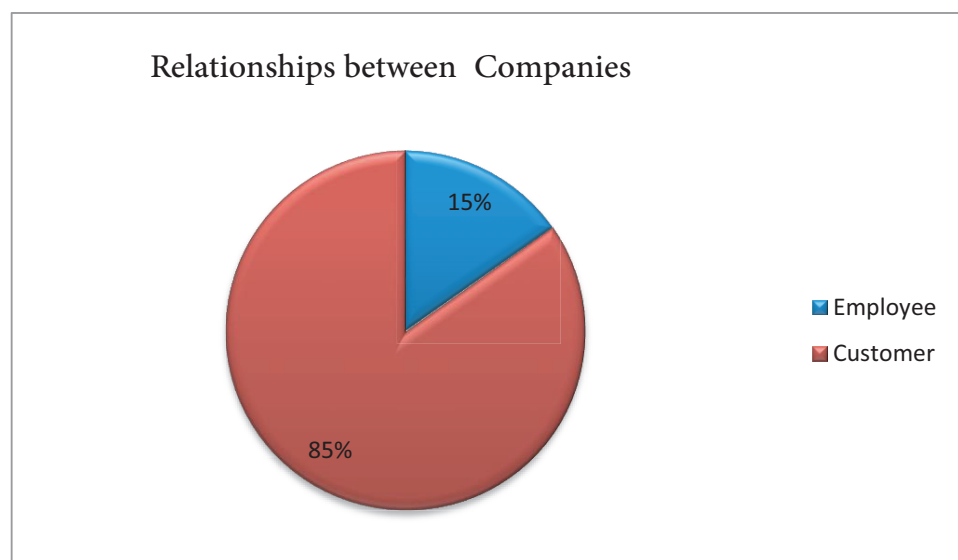


Figure 2: Relationships between companies.

Based on Figure ??1 above is a recapitulation of the characteristics of respondents in research based on inter-company relationships, namely 85% are customers and 15% are company employees

TABLE 1: Based on Respondent's age.

Age(Year)	Total	Percentage
<20	1	3%
20-30	25	75,80%
31-40	3	9,10%
41-50	3	9,10%
50>	1	3%
Total	33	100%

The result of the questionnaire from a total of 33 respondents in this study shows 15.2% or 5 of them were employees of PT. Sicepat Express Indonesia. 84.8% or 28 of them were customers who used the services of PT. Sicepat Express Indonesia. Based on the result of the questionnaire from a total of 33 respondents, it can be seen that the age range of respondents was 20-30 years.

3.3. Risk Identification

Researchers conducted observations in PT. Sicepat Ekspress Indonesia to get risk identification, and conduct a risk survey with the questionnaire. The questionnaire was distributed to respondents who had become the criteria that the researchers had previously determined. Risk instruments were made in the form of statements that have been prepared by researchers based on observations during research in PT. Sicepat Ekspress Indonesia described in (table 2.3). The risk identified in this research is Risk of Manpower (SDM), risk of machine(equipment), risk of materials (transportation), risk of method (operational)

For the questionnaire statement table above, there were 2 sides of the assessment needed, which were an assessment of the frequency and impact of risk. This 2-sided assessment was to manage and analyze the results of the questionnaire. The result of this questionnaire was used as a reference in risk mapping in accordance with the research objectives. There are 5 points for each side of the assessment.

3.4. Risk mapping

After identifying the risks and getting the results from the questionnaire, the researcher then puts forward a risk mapping in order to determine the handling, solution, or mitigation of the risks needed. Based on the results of data processing (table 3.1)

TABLE 2: Risk Matriks and the result from respondents.

No	Statement	Frequency					Impact				
		5	4	3	2	1	5	4	3	2	1
1	There are concerns about the reduction of officers/layoffs	2	10	8	9	4	4	12	6	6	5
2	Lack of supervision of health protocols for employees	0	7	15	4	7	3	10	11	4	5
3	The existence of Work From Home (WFH) reduces employees productivity	1	6	13	6	7	3	11	8	4	7
4	There are obstacles in the supervision and communication of employees who do Work From Home (WFH)	5	8	10	5	5	5	8	10	4	6
5	Employees are less careful in checking the number of goods due to lack of operational employees	3	9	10	7	4	6	11	8	4	4
6	Lack of supervision by security officers on customers who come	2	7	7	9	8	4	7	8	6	8
7	There is a reduction in loading time of goods in the delivery section	1	6	11	10	5	5	5	9	9	5
8	Lack of disinfectants for employees and customers	0	11	8	10	4	3	11	7	8	4
9	During the pandemic, PT Sicepat Ekspres Indonesia's packaged goods supplier has become less productive	0	3	16	9	5	5	10	9	5	4
10	The supplier of PT Sicepat Ekspres Indonesia's does not maintain the quality of the materials due to the covid'19	1	2	13	8	9	3	6	10	8	6
11	More maintenannce is needed on the packaging machines during the covid'19 pandemic	2	4	8	10	9	4	3	9	9	8
12	Restrictions on Community Activities (PPKM) can hinder the delivery of goods	0	6	11	8	8	4	6	9	8	6
13	Process monitoring/status of goods is hindered	3	11	12	4	3	6	7	12	4	4
14	Lack of supervision of health protocols for employees	0	4	15	9	5	2	8	11	7	5

Source: Result of the Questionnaire from by the Researchers

The table above represents 14 risk indicators based on researcher observations that have been compiled and adapted to the research objectives. The result of the assessment in the table is the total assessment as a whole based on observations from

TABLE 3: Risk of Frequency.

Scale	Likelihood	Frequency of occurrence
5	Almost certain	>30 times for a year
4	Likely	20-30 times for a year
3	Possible	10-20 times for a year
2	Unlikely	5-10 times for a year
1	Rare	<5 times for a year

Source. Keswari and Rinawati 2013

TABLE 4: Risk of Impact.

Scale	Impact	Indicator
5	Catastrophic	the source of the problem is very difficult to identify, causing delays, many complaints to the company, termination of employment
4	Major	cause delays, there are many complaints to the company
3	Severe	cause delays in arriving at the customer
2	Moderate	does not cause delays when it arrives at the customer
1	Minor	easy to complete, does not cause delays, does not have much effect on the overall distribution process

Source. Keswari and Rinawati 2013

researchers. Researchers divides 3 on each result from the results of the assessment table to continue risk mapping.: 1-5 (table 3.2), 6-10 (table 3.3), 11-14 (table 3.4)

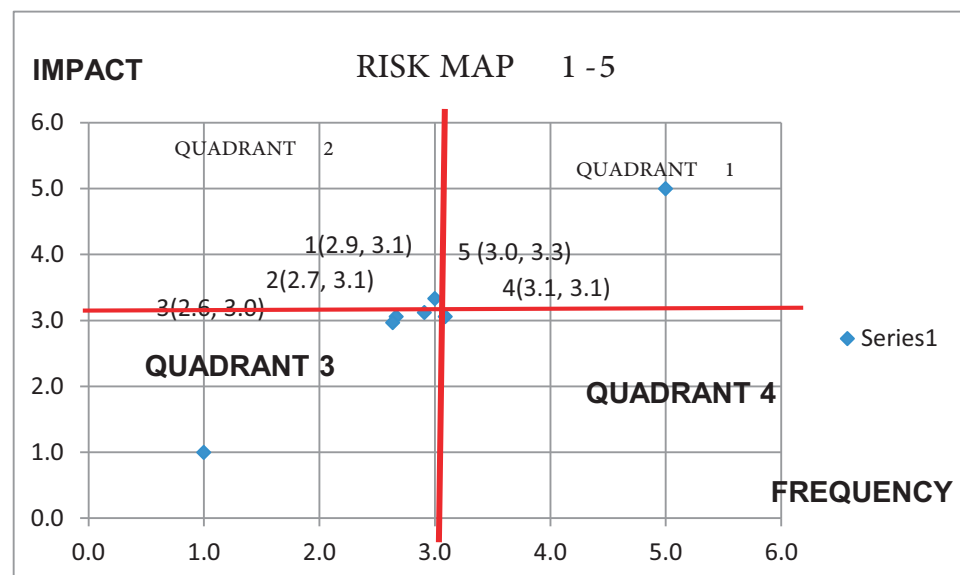


Figure 3: Risk Map 1-5.

TABLE 5: Questionnaire's Research.

No	Statements	Frequency	Impact
1	There are concerns about the reduction of officers/layoffs	2,9	3,1
2	During the pandemic, employees sometimes wear masks that do not meet the standard	2,7	3,1
3	Lack of supervision of health protocols for employees	2,6	3
4	The existence of Work from Home (WFH) reduces employee's productivity	3,1	3,1
5	There are obstacles in the supervision and communication of employees who do Work from Home (WFH)	3	3,3
6	Employees are less careful in checking the number of goods due to lack of operational employees	2,6	2,8
7	Lack of supervision by security officers on customers who come	2,6	2,9
8	There is a reduction in loading time of goods in the delivery section	2,8	3
9	Lack of disinfectants for employees and customers	2,5	3,2
10	During the pandemic, PT Sicepat Ekspres Indonesia's packaged goods supplier has become less productive	2,3	2,8
11	The supplier of PT Sicepat Ekspres Indonesia's does not maintain the quality of the materials due to the covid'19	2,4	2,6
12	More maintenance is needed on the packaging machines during the covid'19 pandemic	2,5	2,8
13	Restrictions on Community Activities (PPKM) can hinder the delivery of goods	3,2	3,2
14	Process monitoring/status of goods is hindered	2,5	2,8

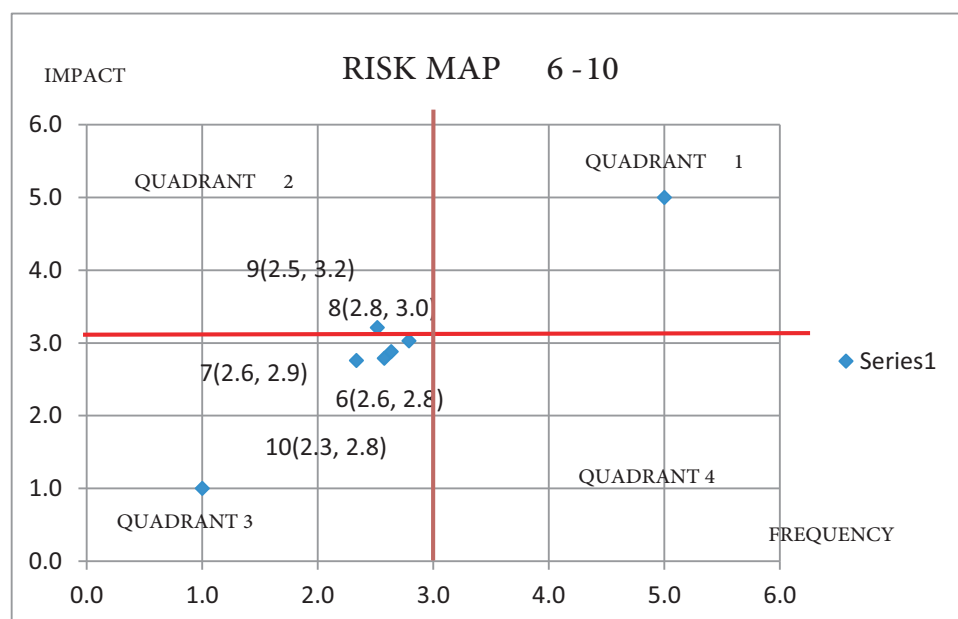


Figure 4: Risk Map 6-10.

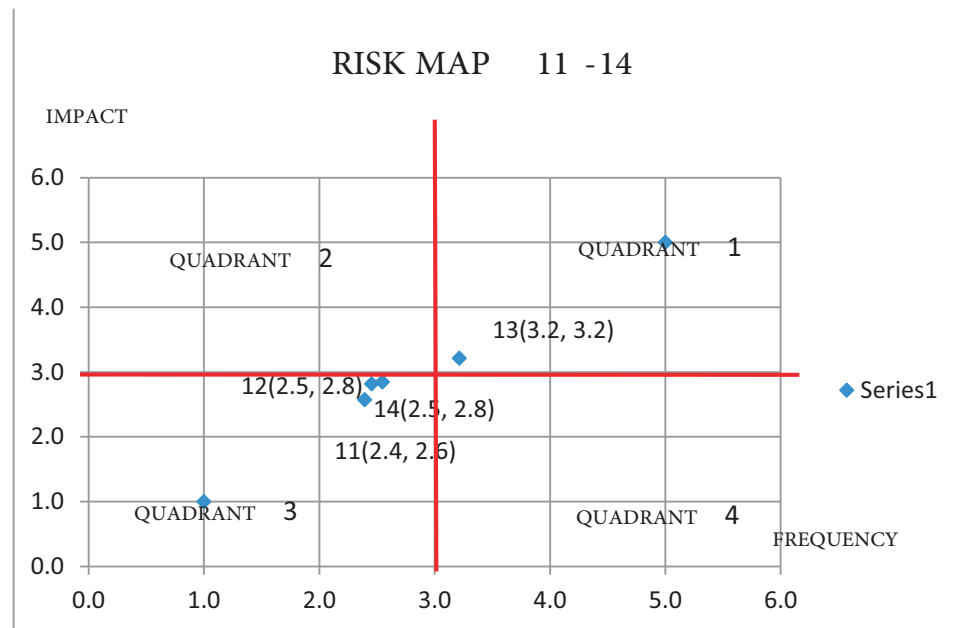


Figure 5: Risk Map 11-14.

4. Risk Mitigation/Recommendation

Risk mitigation is carried out on risks that have a high value. Mitigation step is carried out to reduce the possibility of risk occurrence and also the impact that may occur.

The following is a description of the mitigation of quadrant I risk:

The existence of Work from Home (WFH) reduces employee’s produktivity the company should cretae a team to carry out regular checks on a regular basis when employe-ees are going to do WFH, by asking about the condition of the laptop and Wi-Fi connection before the day of doing WFH or also by providing internet access to support the productivity and performance of employees who are WFH. There are obstacles in the supervision and communication of employees who do work from home (WFH) The company should give instructions and should ask for the results of reports to all heads of divisions to conduct online attendance taking and hold virtual meetings (zoom) to monitor more intensely every employee who do WFH.

Restrictions on Community Activities (PPKM) can hinder the delivery of goods The company should be more up to date and sharing between drivers and the operational section on routers and road blocking that apply during PPKM

The following is a description of the mitigation of quadrant II risks:

1. There are concerns about the reductions of officers/layoffs The company needs to make announcements to all employees to stay focused and do the best.

2. During the pandemic, employees sometimes wear masks that do not meet the standard. The company must provide/educate employees about masks recommended by the ministry of health, such as N95 masks, surgical masks, and fabric masks.
3. Lack of supervision of health protocols for employees, the company needs to create a special team that monitors the progress of all employees everyday.
4. There is a reduction in loading time of goods in the delivery section. The company should find more effective loading times and handling of goods.
5. Lack of disinfectants for employees and customers. The company should do good communication and stock up disinfectant liquid between the procurement team and the office boy team.

The following is a description of the mitigation of quadrant III risks:

1. Employees are less careful in checking the number of goods due to lack of operational employees. The company should implement inspection team rotations to ensure the responsible team does not get too tired and more thorough when checking the goods.
2. Lack of supervision by security officers on customers who come to the company should conduct briefings, provide directions, and conduct periodic evaluations of the security, so that there are no more gaps in the supervision of customers who come to office.
3. During the pandemic, PT Sicepat Ekspres Indonesia's packaged goods supplier has become less productive the company should provide instructions and information of what is going on, so that suppliers are better at choosing the quality of goods to be sent.
4. The supplier PT Sicepat Ekspres Indonesia's does not maintain the quality of the materials due to the covid'19 The company should carry out controlling and further communication by the procurement department to the supplier regarding the specifications of the goods needed by the company.
5. More maintenance is needed on the packaging machines during the covid'19 pandemic The company should prepare technicians to periodically check the packaging machines.

6. Process monitoring/status of goods is hindered the company should create a special inspection team that is able to monitor changes in the status of goods in the computer system.

5. Conclusion

Several conclusions can be drawn from the results of our study:

1. The results of the calculation of risk scores from 14 indicators (table3.1). There are 3 risk quadrants consisting of Quadrant I, Quadrant II, and Quadrant III. Quadrant I, which means that it is the level of risk that often occurs and has an impact on the company, in this case Quadrant I is a major priority for the company. Quadrant II, which means that it is the level of risk that is rare but very impactful. Quadrant III, which means that it is the level of risk that often occurs but is not too impactful.
2. Quadrant I is the main priority for the company. In (table3.1) it is found that 3 risk indicators are the main priority for the company, they are: The existence of the work from home (WFH) reduces employee productivity, there are obstacles in supervision and communication of employees who do WFH, Restrictions on Community Activities (PPKM) can hinder delivery goods. Respondents believed that this risk would threaten the company in the current pandemic. The company must take the best countermeasures/solutions so that this risk can be eliminated.
3. The possible risk mitigation effort carried out by the company is to coordinate with each head of division and employee to reduce the risks considered as main priorities. The company should give instructions on important parts to reduce/eliminate risks that cause losses to the company, for example, in the operations and delivery departments which have related risks and the HRD department to carry out extra supervision on employees who work in the office or at home.

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