



**OPERATIONAL MANAGEMENT READINESS IN ENHANCING
CUSTOMER SATISFACTION (A CASE STUDY OF PT. CIPTA KARYA
TECHNOLOGY IN MEDAN CITY)**

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Abstract

The advancement of information and communication technology has intensified the demand for fast and stable internet services. Consequently, internet service providers (ISPs), particularly those offering WiFi services, must strengthen their operational management readiness to meet customer expectations. This study aims to analyze the extent to which operational management readiness contributes to enhancing customer satisfaction among WiFi internet service users in a private company. The findings indicate that strong operational management readiness significantly improves customer satisfaction by enhancing service quality, reducing waiting times, and improving accessibility. Therefore, ISPs should prioritize operational management readiness as a strategic component to increase customer satisfaction and sustain competitive advantage.

Keywords: Operational Management Readiness, Customer Satisfaction, WiFi Internet Services



INTRODUCTION

In this modern era, the internet has become an inseparable part of everyday life. From communication to information, from business to education, the internet has become a very important tool to improve the quality of life and open up new opportunities. With the ability to access information and communicate with others from around the world, the internet has become the key to increasing productivity, innovation, and prosperity (Ihksan, 2022).

The importance of the internet is not only limited to economic and business aspects. It has also become a very important tool to improve the quality of life, such as facilitating access to health, education, and government services (Perahia, 2013).

In the past few decades, internet technology has evolved rapidly and become an integral part of everyday life. One technology that has revolutionized the way we communicate and access information is WiFi internet. With the ability to access the internet wirelessly, WiFi has become a very popular and widely used technology around the world (M. Gast, 2002).

Internet access has become a basic need for the community. Internet service provider (ISP) companies play an important role in providing fast, stable, and affordable internet access for the community. With the ability to provide quality internet services, ISP companies have become an integral part of everyday life, supporting various activities such as communication, education, business, and entertainment (Crow et al., 1997).

As one of the WiFi internet service providers, companies must ensure that their operational management is ready to improve customer satisfaction. Customer satisfaction is a key factor in increasing customer loyalty and retention, so that companies can maintain their position in a competitive market (Vacca, 2006).

However, improving customer satisfaction is not easy. Companies must ensure that their operational management has the ability to manage resources, optimize business processes, and improve service quality. Therefore, companies must evaluate the readiness of their operational management in improving customer satisfaction (Geier, 2002).

PT Cipta Karya Technology is a technology company based in Indonesia. The company was established in 2011. PT Cipta Karya Technology is an experienced and trusted technology company in Indonesia. With a vision to become one of the leading technology service providers in Indonesia, the company continues to innovate and improve service quality to meet customer



needs, and a mission to provide high quality technology services and meet customer needs (M. S. Gast, 2005).

This article aims to identify the readiness of operational management in improving customer satisfaction of users of a WiFi internet service in a company. This research also aims to identify the factors that influence operational management readiness in improving customer satisfaction.

The results of this study are expected to provide benefits for WiFi internet service provider companies in increasing customer satisfaction. This research can also contribute to the development of operational management theory and practice in improving customer satisfaction.

LITERATURE REVIEW

Operational Management Readiness

Operational management readiness is defined as the organization's ability to manage resources, optimize business processes, and improve service quality to achieve organizational goals (Slack & Lewis, 2017).

Factors Affecting Operational Management Readiness

The following are the factors that affect operational management readiness, some of the factors that affect operational management readiness include:

1. Management Capability: Management's ability to manage resources, optimize business processes, and improve service quality (Kotter, 1995).
2. Information Systems: Effective information systems can help management in decision making and resource management (Laudon & Laudon, 2010).
3. Organizational Culture: An organizational culture that supports innovation, cooperation, and capability development can improve operational management readiness (Schein, 2010).
4. Resources: The availability of adequate resources, such as human resources, technology, and budget, can improve operational management readiness (Wernerfelt, 1984).

Operational Management Readiness Model

In addition, here are some things related to the operational management readiness model. Some operational management readiness models that have been developed include (Anderson & Sullivan, 1993):

1. Operational Management Readiness Model (Slack et al., 2010): This model identifies four dimensions of operational management readiness, namely management capabilities, information systems, organizational culture, and resources.



2. Maturity Model (Crawford & Bryce, 2003): This model identifies five maturity levels of operational management readiness: initial level, development level, integration level, optimization level, and innovation level.

Operational Management Conclusion

Next is about the conclusion of operational management. Operational management readiness is the organization's ability to manage resources, optimize business processes, and improve service quality to achieve organizational goals (Kotler & Keller, 2012). Factors that influence operational management readiness include management capabilities, information systems, organizational culture, and resources. The operational management readiness model can be used to identify the level of operational management readiness of an organization.

Customer Satisfaction

Customer satisfaction is defined as a feeling of satisfaction or dissatisfaction experienced by customers after using a product or service (Oliver, 2015). Customer satisfaction is the result of a comparison between customer expectations and the performance of the product or service received (Parasuraman et al., 1994). the following some explanations of customer satisfaction theory (A. V. Hill, 2015; Jacobs & Chase, 2018):

Customer Satisfaction Theory

1. Customer Satisfaction Theory by Oliver (1980): This theory explains that customer satisfaction is the result of a comparison between customer expectations and the performance of the product or service received.
2. Service Quality Theory by Parasuraman *et al.*, (1985): This theory explains that customer satisfaction is the result of a comparison between customer expectations and the performance of services received, and is influenced by factors such as reliability, responsiveness, certainty, empathy, and physical evidence.
3. Customer Satisfaction Theory by Fornell (1992): This theory explains that customer satisfaction is the result of a comparison between customer expectations and the performance of the product or service received, and is influenced by factors such as product quality, price, and service (Fornell, 1992).

Factors Affecting Customer Satisfaction

In addition, several factors affect customer satisfaction, namely as follows (Heizer & Render, 2014):

1. Quality product quality Product quality that is Good product quality can increase customer satisfaction (Parasuraman et al., 1994).
2. Competitive prices can increase customer satisfaction (Fornell, 1992).



3. Good service can increase customer satisfaction (Parasuraman et al., 1994).
4. Ease of use of products or services can increase customer satisfaction (Fornell, 1992).

Therefore, customer satisfaction is the result of a comparison between customer expectations and the performance of the product or service received. Factors such as product quality, price, service, and ease of use can affect customer satisfaction. Customer satisfaction theory can be used as a reference to improve customer satisfaction and increase customer loyalty.

WiFi Internet Service

Wi-Fi (Wireless Fidelity) is a wireless networking technology that allows electronic devices to connect to the internet and communicate with each other without physical wires. Wi-Fi uses radio waves to transmit data (Kleinrock, 2007).

History of WiFi Internet Service Development

WiFi was first developed in the 1970s by the University of Hawaii (Kumar, 2014). In 1997, IEEE (*Institute of Electrical and Electronics Engineers*) developed the first standard for wireless technology, IEEE 802.11 (IEEE, 1997).

WiFi Working Principle

WiFi works by using radio waves to transmit data between devices (Kumar, 2014). WiFi devices have components called WiFi adapters, which function to transmit and receive WiFi signals (Kleinrock, 2007).

Advantages of WiFi

Regarding its use, there are many advantages that you can get from *wireless* internet networks, including:

1. Accessibility

The first advantage of a *wireless* internet network is the ease of accessing the internet. You don't need to use cables to be able to communicate remotely via the internet. Instead, simply activate the WiFi connection on the device and connect it to the network.

2. Easy Installation Process

Wireless network installation is relatively much faster and easier than wired networks. The level of security during the network installation process is better. In addition, you can also do configuration settings easily.

3. Wide Range

You will also get benefits regarding the range of internet access. *Wireless* networks can easily reach places that are difficult to access with wired internet.



4. Flexibility

The use of internet networks can help users to work flexibly from anywhere. You can surf anywhere, as long as you are still within WiFi range.

5. Efficient

Wireless networks provide convenience in the data transfer process. *Wireless* data communication can be faster and more convenient.

6. Affordable Cost

The last advantage is related to cost. The *wireless* network installation process does not require large costs, so it is relatively more affordable.

Disadvantages of WiFi

Some disadvantages related to the utilization network, internet *wireless*. These disadvantages include (Stevenson, 2018):

1. Security Level

The process of installing and maintaining a *wireless* network needs to be a serious concern. If not done properly, *wireless* internet networks have a very vulnerable level of security. *Hackers* can easily connect to the network and at the same time take various important data contained in it.

2. Limited *Bandwidth*

Compared to wired internet, *wireless* networks have a relatively smaller *bandwidth* capacity. In addition, limited *bandwidth* is also potentially stolen by neighbors when the network is not protected by a strong *password*. Due to limited *bandwidth*, the internet user capacity of *wireless* networks is not too much. If the number of users exceeds the capacity, you will experience difficulties in accessing the internet.

3. Speed

You will also face relatively slower internet speeds than wired internet. Data transmission speed depends on the location. If you get a strong WiFi signal, you can enjoy comfortable internet access. the internet comfortably. The opposite situation will happen if you get a weak WiFi signal.

4. Initial Cost

The cost of installing a *wireless* network is relatively affordable. However, the initial investment that needs to be spent to build the network is very high. The reason is that *wireless* networks require more specific devices than wired networks.

5. Prone to Interference

Finally, you need to be aware of various internet connection disruptions. Many external factors can affect the quality of the internet network, including rainstorms, fog, radiation, vandalism, and the like.



WiFi Internet Service Provider Company

A WiFi internet service provider company is a company that provides internet access to customers through WiFi technology (Kumar, 2014).

Development History of the WiFi Internet Service Provider Company

WiFi internet service provider companies began to develop in the 1990s, when WiFi technology was introduced (Spreng & Mackoy, 1996). At first, WiFi internet service provider companies only provided internet access to customers in certain areas. However, along with technological developments, WiFi internet service provider companies began to provide wider and faster internet access (Chase & Aquilano, 2023).

Characteristics of WiFi Internet Service Provider Companies

Some characteristics of WiFi internet service provider companies include:

1. Internet Access Availability: Internet service provider companies
2. WiFi internet service provider companies must provide stable and fast internet access to customers (Kumar, 2014).
3. Quality of Service: WiFi internet service provider companies should provide high-quality services, including good technical support and fast response times (Kleinrock, 2007).
4. Competitive Price: WiFi internet service provider companies should offer prices that are competitive with other companies that provide similar services (Kumar, 2014).

Marketing Strategies of WiFi Internet Service Provider Companies

Some of the marketing strategies that can be used by WiFi internet service provider companies include:

1. Online Promotion: WiFi internet service provider companies can use online promotions, such as Google Ads and ads on social media, to increase customer awareness and interest (Kumar, 2014).
2. Cooperation with Other Companies: WiFi internet service provider companies can cooperate with other companies, such as telecommunication companies and technology companies, to improve service quality and increase customer reach (Kleinrock, 2007).
3. High Quality Service: WiFi internet service provider companies should provide high-quality services, including good technical support and fast response time, to increase customer satisfaction (Kumar, 2014).

Therefore, a WiFi internet service provider company is a company that provides internet access to customers through WiFi technology. This company



must provide stable and fast internet access, high-quality services, and competitive prices to increase customer satisfaction and increase customer reach.

PT Cipta Karya Technology

PT Cipta Karya Technology is a technology company based in Indonesia. The company was established in 2011, with a vision to become one of the leading technology service providers in Indonesia.

Company Profile

PT Cipta Karya Technology is engaged in the provision of technology services, including:

1. Software development
2. System integration
3. Provision of internet and network services (internet service provider)
4. Technology consulting

Mission and Vision

The mission of PT Cipta Karya Technology is to provide high quality technology services and fulfill customer needs. The company's vision is to become one of the leading technology service providers in Indonesia.

Advantages

PT Cipta Karya Technology has several advantages, including:

1. Experienced and skilled team in the field of technology
2. Use of the latest and newest technology
3. Flexible and customizable services according to customer needs
4. Competitive and affordable prices

Awards and Certifications

PT Cipta Karya Technology has received several awards and certifications, including:

1. ISO 9001:2015 certification for quality management system
2. ISO 27001:2013 certification for information security management system
3. Award as one of the best technology companies in Indonesia

RESEARCH METHOD

The type of research conducted by the author is descriptive qualitative research. Qualitative research is research that is intended so that phenomena related to research subjects such as behavior, perceptions, motivations and actions can be more easily understood through descriptions in the form of words and language in a special natural context. Subjects are people, places, or objects that are observed as targets for observation. The subject of this research is PT Cipta Karya Technology. While the object is the thing that is the target of research.



In this study, the object of research is the operational work patterns of companies engaged in providing high-quality technology services and meeting customer needs consisting of planning, installation, testing, launching, maintenance.

In related research, data collection is obtained through interviews. The interview technique used in this qualitative research is a semi-structured *in-depth interview* by asking questions that have been prepared and in accordance with the problem under study. In this technique, the tool used in this research is an interview guide, which is very useful in research so that the interviews conducted do not deviate from the research objectives and also based on related theories. Research objectives and also based on theories related to the problem under study.

The type of data required by researchers is primary data. Primary data is obtained by the author from informant interviews studied in order to answer the formulation of the problem to be studied and obtained through direct interviews with branch leaders, supervisors, employees and consumers.

The selection of informants was carried out using *purposive sampling* technique. The informants referred to in this study act as data sources or subjects who master the problem, have data and are willing to provide complete and accurate information. Based on this technique, the main source of information in this study is informants from within the company (internal), namely Krisman as Branch Manager of PT Cipta Karya Technology, Reza as Supervisor, Heri as Employee.

RESULTS AND DISCUSSION

Company Profile

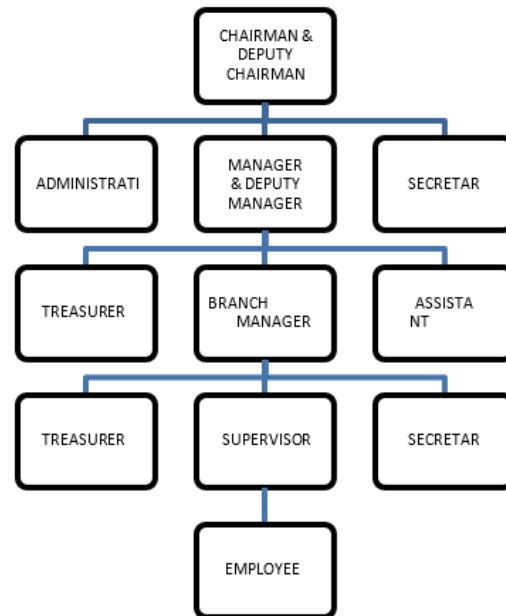
PT Cipta Karya Technology is a technology company based in Indonesia. The company was established in 2011, with a vision to become one of the leading technology service providers in Indonesia. PT Cipta Karya Technology is engaged in the provision of technology services, including; *software development, system integration, internet service provider, technology consulting*.

Company Vision and Mission

The mission of PT Cipta Karya Technology is to provide high quality technology services and meet customer needs. The company's vision is to become one of the leading technology service providers in Indonesia.

Organizational Structure of PT Cipta Karya Technology

The following is a brief organizational structure of PT Cipta Karya Technology:



Advantages

PT Cipta Karya Technology has several advantages, namely having an experienced and skilled team in the field of technology, using the latest and newest technology, providing flexible and customizable services according to customer needs, and providing competitive and affordable prices.

Awards and Certifications

PT Cipta Karya Technology has received several awards and certifications. First, ISO 9001: 2015 certification for quality management system, second, ISO 27001: 2013 certification for information security management system, and third award as one of the best technology companies in Indonesia.

PT Cipta Karya Technology is an Indonesian-based technology company engaged in the provision of technology services. The company has several advantages, including an experienced and skilled team, the use of the latest and newest technology, flexible services, and competitive prices.

Readiness of Operational Management in Improving Customer Satisfaction of Wifi Internet Service Users at PT Cipta Karya Technology in Medan City.

From the results of the research conducted by researchers, PT Cipta Karya Technology has 5 stages in implementing the company's operational readiness. The following are the 5 stages carried out by PT Cipta Karya Technolog:

1. Planning

PT Cipta Karya Technology conducts a needs analysis by determining customer needs and the type of internet services to be provided. After that, the



company selects technology by choosing the appropriate technology to provide internet services, such as fiber optic, cable, or wireless. And finally, at this stage

The company makes network planning by planning the network that will be used to provide internet services.

2. Installation

In this second stage, the company performs hardware installation by installing the necessary hardware, such as routers, switches, and servers. After that, it performs software installation by installing the necessary software, such as operating systems and applications. And finally configure the network by configuring the network to provide internet services.

3. Testing

In this third stage, the company conducts network testing by testing the network to ensure that internet services can be accessed stably and quickly. Furthermore, the company conducts security testing by testing network security to ensure that customer data is safe. Then the last one tests the quality of service by testing the quality of internet services to ensure that internet services meet the expected standards.

4. Launching

The initial step in the fourth stage of the company is to launch the service by launching internet services to customers. Then set up customer accounts by setting up customer accounts and ensuring that customers can access internet services. The final step at this stage is for the company to monitor the quality of service by monitoring the quality of internet services to ensure that internet services meet the expected standards.

5. Maintenance

In this final stage, the first step taken by the company is to perform network maintenance by maintaining the network to ensure that internet services can be accessed stably and quickly. The second step with hardware and software maintenance, by maintaining hardware and software to ensure that internet services can be accessed stably and quickly. Finally, the company conducts service quality supervision, overseeing the quality of internet services to ensure that internet services meet the expected standards.

Factors Affecting Operational Management Readiness in Improving Customer Satisfaction of Wifi Internet Service Users at PT Cipta Karya Technology in Medan City

In this case, the researcher conducted an interview and was able to find a statement that in the company, there are several supporting factors and inhibiting



factors experienced when carrying out the operational process of providing WiFi internet services. Researchers found several statements that there are supporting factors that support the readiness of operational management in increasing customer satisfaction of users of a Wifi internet service at PT Cipta Karya Technology in Medan City, namely technical supporting factors, non-technical supporting factors, and environmental factors. The following is an explanation.

6. Technical Support Factors

The first factor is the quality of the devices used, namely the quality of WiFi devices, such as *routers* and *access points*, which can affect the speed and coverage of WiFi services. In this case, the company overcomes this factor

by improving the quality of the devices, namely using high-quality WiFi devices and updating the devices regularly.

The second factor experienced by the company is network configuration such as IP and DNS settings, which can affect the performance of WiFi services. In this case, the company overcomes by optimizing the network configuration to increase the speed and quality of WiFi services.

The third factor is the available *bandwidth* capacity can affect the number of users that can be accessed simultaneously. In this case, the company overcomes it by increasing *bandwidth* capacity, namely by increasing *bandwidth* capacity to increase the number of users that can be accessed simultaneously.

The fourth factor experienced by the company is that the WiFi technology used can affect the speed and quality of WiFi services. In this case the company uses the latest WiFi technology, namely using the latest WiFi technology, such as WiFi 6, to increase the speed and quality of WiFi services.

7. Non-Technical Supporting Factors

The first is the quality of the company's service to customers. In this case, the company always makes improvements in providing quality customer service by providing good and responsive technical support.

Second is company policy. In this case, the company develops policies and procedures, namely by developing clear and effective policies and procedures for managing WiFi services. For example, by providing discounts on installations in newly opened areas.

Third is the availability of resources. In this case, the company increases the availability of resources by increasing the availability of resources, such as costs and labor, to support the provision of WiFi services. For example, by cooperating with parties who want to invest in the company and selecting labor properly, namely choosing workers who have a good personality and have experience that can be accounted for.



Fourth is the marketing strategy. In this case, the company develops a marketing strategy, namely by developing an effective marketing strategy to increase customer awareness and interest in WiFi services. For example, forming an active and creative marketing team in introducing WiFi services, and the company provides many varied and affordable price options but with optimal quality according to the availability of services provided and the desired needs.

8. Environmental Supporting Factors

The first is geographical conditions such as topography and weather. In this case the company overcomes it by developing risk mitigation to overcome the impact of unfavorable geographical and weather conditions. That is, analyzing all forms of risk and providing solutions if there is a change in topography, for example, development carried out by the government which may have an *impact* on the infrastructure that the company has built in advance.

The second is government policy. In this case the company develops partnerships with the government in several locations in the city of Medan to obtain the necessary information, support and resources.

Third is infrastructure. In this case the company develops an effective infrastructure development strategy to improve the availability and quality of WiFi services. That is by building quality and up-to-date infrastructure in accordance with the SOP.

Fourth is the monitoring system. In this case the company developed an effective monitoring system to monitor the quality and availability of WiFi services. Namely forming a patrol team that has a regular schedule that has been determined by the company.

However, among the supporting factors mentioned, researchers also found inhibiting factors that hinder the readiness of operational management in increasing customer satisfaction of users of a Wifi internet service at PT Cipta Karya Technology in Medan City, namely environmental inhibiting factors. The following is the explanation.

The first is the high level of population density in Medan City. This affects because if there is an internet network disruption in an area in the city of Medan, the team sent by the company to go to the location is hampered because of the traffic conditions in the city of Medan which are jammed. In this case the company overcomes the most optimal way is to brief the team heading to the location to use the fastest route by using directions from the google maps application which is able to provide the fastest route or path to the location. Second is the high crime rate in Medan City. This affects the quality of internet services because of the



frequent destruction and theft of the company's infrastructure or what is called internet interference in an area due to vandalism. In this case the company overcomes by working with the security or police to handle this.

The third is the high level of thuggery in Medan City. This affects the quality of internet services because of the frequent extortion and harassment of workers while doing work in the field. So that work in the field becomes long. In this case, the company provides education to each worker to be able to communicate well with the party first, but if the party does not want to cooperate the company will work with the security forces or the local police. The company also educates workers to do things that can provide evidence to the security or police to secure the perpetrator, for example by taking photos or making videos as evidence.

The fourth is the high level of infrastructure development carried out by the Medan City Government. This is an obstacle because there will usually be an impact on the company's infrastructure that has been built by the company in advance due to lack of information from the government in several locations in Medan City. In this case, the company overcomes it by working with the government to always get information in order to plan things that might become company risks and discuss with the government to determine the most appropriate decision so as not to harm each other.

CONCLUSION

Based on the results and discussions that have been carried out after the research, it can be said that PT Cipta Karya Technology already has operational management readiness in improving customer satisfaction properly. The company has also provided and implemented a good operational management system with supporting factors such as technical supporting factors by using high-quality WiFi devices and updating devices regularly, optimizing network configurations to increase network speed and quality, increasing *bandwidth* capacity to increase the number of users that can be accessed simultaneously, and using the latest WiFi technology, namely WiFi 6. Furthermore, there are also non-technical supporting factors by providing good and responsive technical support, developing clear and effective policies, increasing resources such as costs and manpower, and improving marketing strategies. Finally, there are environmental support factors, namely by developing risk mitigation to overcome the impact of unfavorable geographical and weather conditions, developing partnerships with the government to obtain the necessary resources, developing effective



infrastructure development strategies to improve service availability and quality, and developing effective quality monitoring to improve availability and monitor service quality.

But among them, there are still some factors that may still be in discussion to overcome them. The inhibiting factors of operational management readiness in improving customer satisfaction are the vastness of Medan City, the high level of population density, the high level of development, and the high level of crime in the city of Medan, which are still inhibiting factors. The fact is that until now, it has still hampered the company's operational management activities.

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