



Strategies for Enhancing Services Based on Information Systems and Global Marketing Research at PT Angkasa Pura Indonesia Airports

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Abstract: This articles “Strategies for Enhancing Services Based on Information Systems and Global Marketing Research at PT Angkasa Pura Indonesia Airports” explores the role of information systems and global marketing research in enhancing airport service quality at PT Angkasa Pura Indonesia. Persistent challenges such as prolonged waiting times, poorly managed queues, and insufficient facilities for special needs passengers have impacted passenger satisfaction and the airport's reputation. Leveraging big data and Know Your Customer (KYC) systems presents an opportunity to address these issues. Using a qualitative case study approach, data were collected through in-depth interviews, observations, and document analysis. SWOT analysis was applied to evaluate internal strengths, weaknesses, external opportunities, and threats. The findings reveal that KYC implementation effectively utilizes big data for service personalization and operational efficiency. The Internal Factor Evaluation (IFE) score of 2.89 and the External Factor Evaluation (EFE) score of 2.95 highlight strong internal and external factors. However, challenges remain, including infrastructure limitations and low customer awareness of the KYC system. The recommended strategy is to maximize strengths to address threats (ST strategy). Key steps include improving customer education on KYC, enhancing accessibility at remote airports, and automating customer service processes. These efforts aim to improve passenger satisfaction, strengthen competitiveness, and elevate the airport's global standing.

Keywords: service quality, information systems, kyc, big data, swot analysis.

INTRODUCTION

Air transport was traditionally highly regulated, fragmented, and protected (Kazda et al., 2013). Airports represent a significant piece of infrastructure within the transportation sector, playing a vital role in the economies of nations by accommodating millions of travelers each year. In order to capitalize on this immense and profitable opportunity, airports globally have

been striving to establish themselves as preferred transit hubs for both travelers and airlines (Kosiba et al., 2020). In recent years there has been a shift in focus from operational excellence to providing an impressive customer experience Amid increasingly fierce business competition and the continuous growth of the global market, the success of a company is no longer solely determined by the products or services it offers. Instead, the ability of a company to adapt and implement effective marketing strategies has become a critical factor in dominating the market. One of the essential tools that assists companies in making precise marketing decisions is the integration of information systems and global marketing research (Nordin & Ravald, 2023).

In the rapidly advancing era of globalization, the aviation sector plays a crucial role in connecting various regions and driving the economic growth of a country. Airports, as the primary gateways for air transportation, serve as focal points that determine the quality of services and the efficiency of passenger and cargo movement. Based on Table 1.1, Soekarno-Hatta International Airport stands as one of the busiest airports in Indonesia, accommodating over 26 million passengers annually in 2023. With its strategic position, this airport serves as a benchmark for the performance of the national aviation industry and as a representation of Indonesia's image on the global stage.

Table 1. Number of Airplane Passengers at Airports in 2020-2022

Major Airports	Number of Airplane Passengers at Major Airports (Person)							
	Domestic Flight Departures				International Flight Departures			
	2020	2021	2022	2023	2020	2021	2022	2023
Kualanamu	1,313,501	1,358,551	2,349,151	2,543,261	188,473	3,150	415,270	924,956
Soekarno Hatta	8,621,796	7,945,377	16,065,900	18,538,574	1,517,922	612,230	3,751,993	6,783,267
Juanda	2,747,248	2,471,367	4,316,508	5,201,166	199,102	8,552	478,325	5,712,649

Source: BPS, (2024)

Customer satisfaction has long been recognized as a key indicator of airport operational success and a critical factor in maintaining competitiveness in the aviation industry (Sabbit Aqdamana Lubis & Raza Bunahri, 2023). Previous studies have shown that customer satisfaction at airports is influenced by various factors, including the quality of facilities, the level of technology adoption, the competency of human resources, and operational efficiency. However, the relationship between these factors and their impact on customer satisfaction in the context of Indonesian airports, particularly Soekarno-Hatta Airport, has yet to be comprehensively explored.

Information systems and global marketing research constitute a series of processes undertaken by companies to collect, analyze, and interpret data from various markets worldwide (Sudirjo, 2023). The primary objective is to understand consumer needs and preferences, as well as to predict upcoming market trends.

Airports serve as the primary gateways connecting passengers to air transportation services. One of the major challenges at many airports, including those managed by PT Angkasa Pura, is the inconsistent quality of service. This issue is associated with limitations in passenger services, such as long waiting times, poorly organized queues, and a lack of clear directional signage. In some instances, services for passengers requiring special attention, such as those with disabilities, remain problematic. Poor service quality can decrease passenger satisfaction levels and negatively impact the airport's image (Shafira & ., 2020).

The capacity of airport facilities often becomes a constraint, especially during peak passenger volumes. Long lines at check-in counters, overcrowded waiting areas, and insufficient facilities such as restrooms and lounges can reduce passenger comfort.

Additionally, facilities for passengers with special needs remain suboptimal at certain airports. These inconveniences can affect passengers' perceptions of the airport and lead to reduced loyalty (Ma & Ma, 2022).

Passenger congestion and queue management become significant issues, especially during holiday seasons or large flight events. Poorly managed queues can increase passenger stress levels and slow down service processes. Airports that lack efficient queue management systems often struggle to handle large volumes of passengers, which affects the speed and quality of service (Jain et al., 2020).

Improving service quality at airports is crucial for enhancing passenger satisfaction and airport competitiveness. PT Angkasa Pura Indonesia must focus on improving service quality, better facilities, more accurate information systems, and the implementation of more efficient queue management technologies. By addressing these issues, the company can enhance the passenger experience, which will ultimately contribute to the airport's reputation and the company's growth in the global aviation industry.

In this increasingly advanced digital era, information systems and global marketing research are becoming more important. The globally connected online market opens new opportunities for companies to market their products and services worldwide. However, with these opportunities come new challenges. Companies must be able to navigate the complexities of diverse global markets, each with its own cultural, linguistic, and regulatory differences.

One of the advantages of information systems and global marketing research is its ability to provide in-depth insights into target markets. By collecting accurate and reliable data, companies can understand consumer profiles, purchasing behaviors, and unique preferences. This data becomes a strong foundation for developing targeted and effective marketing strategies.

Additionally, information systems and global marketing research help companies identify new opportunities in the global market. By closely monitoring trends and conducting market analyses, companies can respond more swiftly to changes in consumer preferences, technology, or emerging competition.

Overall, information systems and global marketing research provide a competitive advantage for companies in facing the increasingly intense global competition. Companies that can effectively utilize these tools will be able to make better decisions, enhance smarter marketing strategies, and ultimately achieve better outcomes in the global competition.

Currently, PT Angkasa Pura Indonesia is developing service improvement based on KYC (Know Your Customer). The basis used is derived from passenger data collected from those who will be traveling by air, through passenger data collection using Big Data technology. This allows the company to understand passenger profiles based on demographics, passenger behavior during waiting times at the airport, and other related factors

Global Marketing

Global marketing refers to the marketing practices employed by companies to expand their market reach beyond national boundaries. This enables companies to access new consumers in various regions, as well as increase their revenue and market share. According to Nainggolan et al. (2024), global marketing can create significant growth opportunities by leveraging the diversity of international markets. However, global marketing also faces major challenges such as cultural differences, language barriers, and varying regulations and policies between countries. Riyani Sijabat et al. (2024) further emphasize that global marketing strategies must be tailored to the local context to be effective, which includes product adaptation, marketing communication, and distribution to address the diverse needs and preferences of different markets. Companies that can adjust their strategies to the dynamics of the global market have the potential to achieve greater success in the international market.

Information System

Information systems are a critical element in the modern operations of companies, consisting of information technology and the use of data to support decision-making processes. According to Hilia Anriva (2024), integrated information systems enable companies to acquire accurate and timely data, which in turn enhances operational efficiency and resource management (Basuki, 2023). Adaptive and responsive information systems to rapid changes in the business environment are key to long-term success. This is particularly important in industries that are highly dynamic, where companies must quickly adapt to technological, market, and regulatory changes. For example, information systems supporting big data analysis can provide deeper insights into customer behavior and market trends, which can be used to develop more effective strategies.

Customer Feedback

Customer feedback is information obtained from customers regarding their experiences with the products or services provided by a company. According to Khofi et al. (2024), this feedback holds strategic value as it allows companies to identify areas that need improvement and strengthen aspects that are already performing well. Rane et al. (2023) emphasize that a quick and accurate response to customer feedback is essential in building strong relationships and enhancing customer loyalty. In this increasingly connected world, customers tend to share their experiences through digital platforms, which amplifies the impact of this feedback. Therefore, companies must have an efficient system in place to collect, analyze, and respond to customer feedback in real-time to maintain customer satisfaction and create better experiences.

Quality of Service & Airport Facilities

The quality of service and facilities at airports significantly influence passenger satisfaction. Fernanda & Nawang Kalbuana (2024) identify several important dimensions of airport service quality, including service reliability, responsiveness to customer complaints and requests, and empathy in service delivery. High service quality can enhance passenger comfort and experience, which in turn improves the reputation of the airport and the airlines operating there. Furthermore, Napitupulu et al. (2024) indicate that comprehensive and comfortable airport facilities, such as spacious waiting areas, easy access to transportation, and other amenities, play a crucial role in creating a positive experience for passengers. Passengers who feel valued and respected are more likely to return and recommend the service to others.

Passanger Satisfaction

Passenger satisfaction is a subjective assessment of the products or services received during travel. According to Sabbit Aqdamana Lubis & Raza Bunahri (2023), passenger satisfaction is influenced by various factors such as service quality, ticket prices, and the available facilities at both the airport and the aircraft. These factors work synergistically to shape passengers' perceptions of their experience. High satisfaction levels not only contribute to customer loyalty but also encourage positive recommendations, which can attract more new customers. Satisfied passengers are likely to become effective brand ambassadors, providing positive reviews and encouraging others to choose the same service. Therefore, maintaining passenger satisfaction through quality service and adequate facilities is a top priority for airlines and airport authorities.

Growth Trend

Based on operational flight and passenger statistics data over the past 365 days displayed on the dashboard, there has been significant growth in both the number of flights and passengers. The total number of flights reached 82,078, marking a 68.6% increase compared to the previous year, with an average of 225 flights per day (a 69.2% increase). In terms of on-time performance (OTP), the on-time flight rate was recorded at 81%, reflecting a 2% improvement, which indicates progress in flight operations management.

Furthermore, the total number of passengers (pax) reached 13,370,969, with a daily average of 50,342, representing a significant increase of 88.8% compared to the previous period. This data indicates a substantial rise in demand for flight services, both for domestic and international travel needs.

In terms of time distribution, flight and passenger activity exhibited certain patterns. Activity began to rise early in the morning (around 4 AM) and peaked at 11 AM, with an average of 2,000 passengers and 11 flights per hour. Afterward, activity gradually decreased until the evening. Sundays had the highest passenger activity, with an average of 38,300 passengers, followed by Mondays and Saturdays, both with averages exceeding 37,000 passengers.



Source: Research Results

Figure 1. Growth Trend

METHOD

1. Research Type

This study employs a qualitative approach to gain an in-depth understanding of the application of information systems and global marketing research in enhancing services at PT Angkasa Pura Indonesia. This approach allows the researcher to gain deeper insights into how these strategies are implemented in the operational context of airports.

2. Research Approach

This study uses a case study approach to explore in-depth the application of information systems and global marketing research at PT Angkasa Pura Indonesia and how these contribute to the improvement of airport service quality. The case study approach was chosen as it allows

for a detailed analysis of the specific context and the relevance of the application of these strategies in the airport setting.

3. Research Location and Time

This study will be conducted at airports managed by PT Angkasa Pura Indonesia, which implement information systems and global marketing research in airport operations. The research is planned to take place over a period of 3 months, with data collection through interviews and observations during the first and second months, and data analysis in the third month.

4. Data Collection Techniques

Data for this study will be collected using three main methods:

- a. In-depth Interviews: Interviews will be conducted with airport staff and passengers to explore their views and experiences regarding the implementation of information systems and global marketing research, as well as its impact on airport services (Simarmata & Keke, 2016). The interviews will be semi-structured, with guidelines allowing for flexibility.
- b. Participant Observation: The researcher will conduct direct observation at the airport to understand how information systems and marketing research are utilized in operational practices and airport services, as well as to observe the dynamics between staff and passengers.
- c. Documentation: The researcher will also analyze relevant documents, such as annual reports, company policies, and procedures related to information systems and global marketing research, to gain a more comprehensive understanding.

5. Research Instrument

The primary instrument in this study is the interview guide, which will be used to gather information related to the implementation of information systems and global marketing research at PT Angkasa Pura Indonesia, focusing on the following aspects:

- a. Strengths of the implementation of information systems and marketing research in improving service quality.
- b. Weaknesses that may exist in the implementation of information systems and marketing research.
- c. Opportunities that PT Angkasa Pura Indonesia can leverage from the implementation of these systems.
- d. Threats faced in dealing with competition and challenges in the global market.

The interview guide will be flexible, allowing the researcher to explore various relevant issues during the conversation.

6. Data Analysis Techniques

The data collected will be analyzed using SWOT Analysis (Strengths, Weaknesses, Opportunities, and Threats). This technique allows the researcher to identify and evaluate four key aspects of the implementation of information systems and global marketing research at PT Angkasa Pura Indonesia. The analysis steps are as follows:

- a. Identifying Strengths: The researcher will analyze how the implementation of information systems and global marketing research provides a competitive advantage for PT Angkasa Pura Indonesia in improving service quality and meeting passenger needs.
- b. Identifying Weaknesses: The researcher will explore aspects that pose challenges or barriers to the implementation of these systems, including technology, human resources, and operational processes.

- c. **Identifying Opportunities** The researcher will identify new opportunities that PT Angkasa Pura Indonesia can capitalize on through the implementation of global marketing research and information systems to enhance services, such as identifying new market trends, technologies that can be adopted, or improving service quality.
- d. **Identifying Threats:** The researcher will analyze threats or risks faced by PT Angkasa Pura Indonesia in implementing these systems, such as global market competition, regulatory changes, or resistance to new technologies.
- e. **Narrative Construction:** After identifying the SWOT aspects, the researcher will construct a narrative to describe the analysis results and link them to the research objectives, namely improving airport service quality.

RESULTS AND DISCUSSION

1. Global Marketing Research Strategy

To enhance services at airports in Indonesia, particularly those managed by PT Angkasa Pura, the implementation of strategies based on information systems and global marketing research becomes crucial. This approach enables airport management to gain a deep understanding of passenger needs and provide services that align with their expectations.

a. Utilization of Information Systems for Service Improvement

The implementation of advanced information technology can enhance operational efficiency and service quality at airports. The concept of a "smart airport," which integrates various services through digital platforms, can provide a better experience for passengers. For example, the implementation of self-check-in systems, real-time flight information, and navigation services within the airport through mobile applications can simplify passengers' journeys. A study by Pratama and Santoso (2019) emphasizes the importance of technology implementation in improving service quality at airports.

b. Global Marketing Research as a Basis for Decision Making

Conducting marketing research by analyzing global trends and international passenger preferences can assist Indonesian airports in adjusting their services. Understanding passenger demographics, service preferences, and expectations allows airport management to design effective marketing strategies and relevant services. Research by Yuliana (2015) indicates that SWOT analysis, supported by marketing research data, can aid in formulating strategies for public service development at airports.

c. Benchmarking with World-Class Airports: Changi and Incheon

Changi Airport in Singapore and Incheon Airport in South Korea are often used as benchmarks for exceptional service. Both airports are renowned for their modern facilities, operational efficiency, and focus on passenger satisfaction. For instance, Changi Airport offers various entertainment facilities and green spaces that make the experience of waiting for a flight more enjoyable. Meanwhile, Incheon Airport is known for its fast and efficient immigration process. According to a report by CNN Indonesia (2016), passengers at both airports are among the happiest in the world due to the services provided.

d. Adapting Best Practices for Soekarno-Hatta Airport

To improve services at Soekarno-Hatta Airport, several best practices from Changi and Incheon can be adapted:

- 1) **Enhancing Passenger Facilities** Providing recreational areas, indoor gardens, and entertainment facilities to improve passenger comfort while waiting.
- 2) **Digitization of Services:** Developing a mobile application that provides real-time flight information, interactive airport maps, and self-check-in features to streamline the process for passengers.

- 3) Efficiency in Immigration and Security Processes: Adopting biometric technology and e-gates to expedite immigration and security checks, thus reducing queue times.
- 4) Staff Training: Providing continuous training for airport staff to improve service quality and responsiveness to passenger needs.

By implementing these strategies, Soekarno-Hatta Airport can enhance its service quality and compete with world-class airports. The application of integrated information systems, supported by global marketing research, will ensure that the services provided meet the needs and expectations of passengers.

2. Utilization of CSI Technology

PT. Angkasa Pura uses the Customer Satisfaction Index (CSI) system to analyze passenger behavior, which serves as a basis for improving airport services in accordance with the needs and characteristics of service users. Based on the data presented on the dashboard, several key aspects are analyzed to understand customer behavior.



Source: [Research Results](#)

Figure 2. PT Angkasa Pura Customer Satisfaction Index

a. Analysis of Passenger Characteristics and Habits During Airport Stay

PT. Angkasa Pura uses the Customer Satisfaction Index (CSI) system to understand the behavior and characteristics of passengers using airport services. Based on the collected data, the research sample includes 5,400 passengers with an average of 4.1 air trips per year. Passengers spend an average of 1 hour and 13 minutes before departure, with an average expenditure at the airport of IDR 56,000.

The majority of passengers prefer low-cost carriers (LCC) over premium airlines, indicating that most airport users come from the middle-income segment. In terms of travel type, 65% of passengers travel for personal purposes, followed by business, education, and military travel. This data suggests that airport services need to be designed to support the comfort of personal travelers without overlooking the needs of other segments, such as business passengers.

b. Passenger Activities During Waiting Time

Passenger waiting time at the airport is largely spent on leisure activities, primarily using social media (40%), relaxing, and working. However, shopping activity at the

airport is relatively low. This analysis reveals that, despite the airport providing various commercial facilities, their appeal is not strong enough to attract passenger interest. The main reasons passengers do not shop at the airport are that they prefer to bring their own necessities (29%), consider the prices of items at the airport too high (27%), or are not interested in the products available (19%). This indicates that efforts are needed to make airport shopping facilities more competitive and appealing, such as by offering promotions, partnerships with well-known brands, or product variations that cater to passenger needs.

c. Transportation to the Airport and Travel Purpose

The majority of passengers (72%) use private vehicles to reach the airport, while the remainder use online taxis, public transportation, or other vehicles. This pattern indicates that parking facilities are an important aspect to consider in airport operations. Additionally, improving public transportation access to the airport could serve as an alternative for passengers to reduce dependence on private vehicles, especially in airports with high traffic levels. In terms of travel purpose, 75% of passengers are traveling for personal reasons, while 18% are traveling for business, and the remaining for education or other purposes. This information highlights the importance of services that support the comfort of personal travel, such as family waiting areas, as well as additional facilities for business travelers, such as workspaces and conference rooms.

d. Recommendations for Service Improvement

The analysis of passenger behavior through the CSI system provides strategic guidance for PT. Angkasa Pura to enhance the quality of airport services. The following are several recommendations based on data findings:

- 1) Enhancement of Social and Entertainment Facilities: Since the majority of passengers use social media and relax during their waiting time, airport facility management can focus on adding comfortable waiting areas, digital entertainment, and faster, more stable Wi-Fi access.
- 2) Optimization of Shopping and Food Facilities: To address the low interest in shopping at the airport, price promotions or special offers can be introduced. Collaborations with well-known brands and product diversification can also enhance the passenger shopping experience.
- 3) Transportation Efficiency and Accessibility: Given the dominance of private vehicle use, improving parking facilities could be a priority. Furthermore, developing public transportation options to the airport, such as airport trains or shuttle buses, could provide a more efficient and environmentally friendly alternative.

3. SWOT Analysis

Based on the research conducted, a SWOT analysis of Angkasa Pura was generated in efforts to improve services based on information systems and global marketing research.

Table 2. SWOT Analysis

Strengths	Weakness	Opportunities	Threats
1. Service personalization, which allows mapping passenger data and habits, thereby enhancing customer	1. Some remote airports may have limited infrastructure, such as internet and supporting technology. 2. Some data collection operations for	1. Collaboration with strategic partners, such as airlines, hotels, and other service providers. 2. Ability to attract global market	1. Customer habits that perceive providing feedback as unimportant and inconvenient. 2. A decline in trust if feedback does not result in tangible changes.

satisfaction and loyalty.	feedback are still conducted manually.	attention and appeal to international passengers who prioritize efficiency.	3. Some customers who are not familiar with technology and do not own electronic devices.
2. The utilization of big data can help predict passenger needs more accurately.	3. Complaint handling is still slow due to not being fully automated.	3. Strengthening the position as a modern and innovative airport operator at the international level.	4. Customers who are unaware of the KYC program.
3. Optimization of resources becomes more efficient by understanding passenger habits.	4. High implementation costs of the system.		5. Low customer participation in providing feedback.
4. Services provided based on information technology, making them more practical and time-efficient.			

Sources : Authors (2024)

a. Internal Factor Evaluation (IFE) Matrix Analysis

The Internal Factor Evaluation (IFE) Matrix is used to analyze the level of influence of various internal aspects that affect the implementation of the Know Your Customer (KYC) program. This analysis aims to evaluate the internal strategic factors, both strengths and weaknesses, that influence the success of the program. The total IFE matrix score is obtained by summing the results of multiplying the weight and rating of each identified internal strategic factor. The strength and weakness factors are organized based on empirical data obtained through in-depth interviews with Supervisors (SPV) and direct field observations. This approach ensures that the analysis is based on relevant and reliable information sources, providing an accurate picture of the organization's internal readiness to implement the KYC program.

Table 3. Internal Factor Evaluation (IFE) Matrix Analysis

Internal Factor	Weight	Rating	Weight Score
Strengths			
1. Service personalization to enhance customer satisfaction.	0.16	4	0.64
2. The use of big data to predict needs.	0.12	4	0.48
3. Resource optimization through understanding passenger habits.	0.10	4	0.40
4. Technology-based services that are practical and efficient.	0.13	3	0.39
Total	0.51		1.91
Weakness			
1. Limited infrastructure at remote airports.	0.10	2	0.20
2. Data collection operations are still manual.	0.12	2	0.24
3. Slow complaint handling.	0.15	2	0.30
4. High system implementation costs.	0.12	2	0.24
Total	0.49		0.98
IFE TOTAL	1.0		2.89

Source: Author (2024)

Based on the analysis of the table, it can be observed that the strength aspect in the implementation of the Know Your Customer (KYC) program received a score of 1.91, while the weakness aspect received a score of 0.98. When summed, the total score of the internal factors reached 2.89. This figure is above the threshold of 2.5, indicating that overall, the internal aspects in the implementation of the KYC program are strong. The score suggests that the organization has a solid internal foundation to support the implementation of the KYC program, although attention should still be given to the identified weaknesses in order to enhance the overall effectiveness and efficiency of the implementation.

b. External Factor Evaluation (EFE) Matrix Analysis

The External Factor Evaluation (EFE) Matrix is used to analyze the extent to which external factors influence the success of the Know Your Customer (KYC) program implementation. This matrix evaluates external opportunities and threats that may have a significant impact on the program's execution. The total value of the EFE matrix is calculated by summing the results of multiplying the weight and rating given to each identified external strategic aspect. Opportunity and threat factors are obtained through interviews with Supervisors (SPV) who have a deep understanding of KYC program operations, as well as direct field observations to ensure data accuracy. This approach aims to provide a comprehensive picture of the external dynamics that influence KYC implementation, serving as a strong foundation for strategic decision-making.

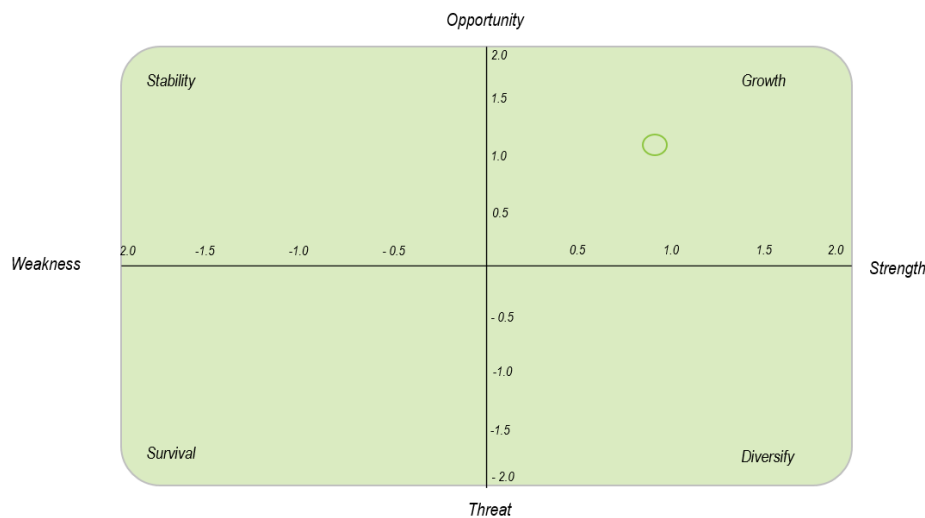
Table 4. External Factor Evaluation (EFE) Matrix Analysis

External Factor	Weight	Rating	Weight Score
Opportunities			
1. Collaborating with strategic partners such as airlines, hotels, and other service providers.	0.15	4	0.60
2. Gaining attention from the global market and attracting international passengers who prioritize efficiency.	0.20	4	0.80
3. Strengthening the international position.	0.15	4	0.60
Total	0.50		2.00
Weakness			
1. Customer habits of being reluctant to provide feedback.	0.15	2	0.30
2. A decline in trust if feedback does not have an impact.	0.12	2	0.24
3. Some customers are not familiar with technology.	0.10	2	0.20
4. Customers' lack of awareness about the KYC program.	0.08	2	0.16
5. Low customer participation in providing feedback.	0.05	1	0.05
Total	0.50		0.95
IFE TOTAL	1.0		2.95

Source: Author (2024)

Based on the analysis of the table, it can be observed that the opportunity aspect in the implementation of the Know Your Customer (KYC) program received a score of 2.0, while the threat aspect recorded a score of 0.95. When both scores are summed, the total value of the external factors reaches 2.95. This figure reflects that overall, the organization is in a good position to capitalize on existing opportunities, although it must remain vigilant regarding the identified external threats. With a total score above the 2.5 threshold, it can be concluded that external factors provide significant support for the success of the KYC program implementation, as long as the identified threats can be addressed with effective mitigation strategies.

Based on the analysis, it can be concluded that the values for each aspect evaluated in the implementation of the Know Your Customer (KYC) program show significant results. The strength aspect recorded a score of 1.91, while the weakness aspect obtained a score of 0.98, resulting in a positive difference (+) of 0.93. On the other hand, for the external aspects, the opportunity value was recorded at 2.0, while the threat aspect received a score of 0.95, with a positive difference (+) of 1.05. These calculations indicate that the strength factors are more dominant compared to internal weaknesses, and the opportunity factors are stronger than the external threats. The positive differences suggest that the implementation of the KYC program has the potential to succeed by leveraging internal strengths and external opportunities, while managing potential weaknesses and threats. These findings can then be visualized in the SWOT diagram below, providing a comprehensive overview of the strategic position of the KYC program.



Source: Research Results

Figure 3. SWOT Analysis

After conducting this SWOT analysis, the author can draw conclusions and determine strategies to improve services at PT Angkasa Pura airports using the SWOT matrix. The SWOT matrix is constructed by combining each factor, including the weakness-opportunity (WO) strategy, strength-opportunity (SO) strategy, weakness-threats (WT) strategy, and strength-threats (ST) strategy.

Table 5. SWOT Matrix Weakness and Strength

	Weakness	Strength
Opportunities	<ol style="list-style-type: none"> 1. Collaborating with strategic partners as internet service providers to improve technology infrastructure at remote airports. 2. Developing digital platforms such as apps or websites to make it easier for customers to provide feedback automatically, quickly, and attractively. 3. Enhancing education and promotion of the KYC program by utilizing social media, airport announcements, or email blasts. 	<ol style="list-style-type: none"> 1. Strengthening global reputation as the main airport operator in Indonesia. 2. Using KYC data to offer flight bundling packages with hotels or transportation services partnered with the airport to enhance personalized services. 3. Leveraging information technology advantages to market the airport as a modern transit destination, thereby attracting international passengers.

		4. Collaborating with partners to implement KYC to optimize customer feedback.
Threats	<ol style="list-style-type: none"> 1. Providing manual kiosks for customers who do not have smartphones or are not familiar with technology, allowing them to still participate in the KYC program. 2. Using a simple feedback system. 3. Automating complaint handling using chatbots or AI-based technology to manage complaints, thereby reducing operational burden. 4. Promoting transparency of feedback results to improve services through monthly reports or visible changes on the ground. 5. Implementing gradual investments starting from the airport with the highest passenger volume. 	<ol style="list-style-type: none"> 1. Increasing the socialization of the KYC program by communicating through various channels such as social media, advertisements, and airport announcements so that customers become more aware of its benefits. 2. Adjusting services for all customers, especially those less familiar with technology, to ensure they feel well-served. 3. Announcing feedback transparency by directly informing customers how their feedback is used to improve services.

Source: Author (2024)

CONCLUSION

Based on the results of the Internal Factor Evaluation (IFE) matrix analysis, the total weighted score obtained is 2.89. This score indicates that the implementation of the KYC system has relatively strong internal factors, as it is above the threshold value of 2.50. This reflects that PT Angkasa Pura Indonesia has successfully leveraged its internal strengths, such as the use of information technology for service personalization and the utilization of big data to improve operational efficiency and passenger experience. However, some challenges still need to be addressed, including infrastructure limitations at certain remote airports and the need for further automation in handling customer complaints.

Meanwhile, the results of the External Factor Evaluation (EFE) matrix analysis show a total weighted score of 2.95, indicating strong external factors in the implementation of KYC, as it is also above the threshold value of 2.50. The company has successfully capitalized on opportunities such as collaborating with strategic partners, including airlines, hotels, and other service providers, as well as strengthening its image as a modern international airport operator. Nevertheless, the company must remain vigilant against external threats, such as customers' lack of understanding of the KYC system and potentially low participation in providing feedback, which could diminish the system's effectiveness.

The analysis places the position of KYC implementation in quadrant I of the SWOT diagram, indicating that the current strategy effectively utilizes internal strengths and external opportunities to enhance service quality. However, it is essential for PT Angkasa Pura to proactively address threats, particularly those related to customers' lack of awareness of the KYC program. This issue could result in reduced customer participation in providing feedback, thereby hindering continuous improvements in the service system. By addressing this threat, the company can enhance customer understanding and participation, ultimately optimizing the implementation of the KYC system.

Given the IFE and EFE analyses, the recommended strategy for PT Angkasa Pura Indonesia is the ST (Strengths-Threats) strategy. This strategy focuses on leveraging internal strengths, such as technological capabilities and big data, to mitigate external threats, particularly customers' low awareness of the KYC system. Suggested steps include increasing socialization efforts and educating customers about the benefits and importance of providing feedback within the KYC program. Furthermore, improving technological accessibility at

remote airports and optimizing automation in customer service processes can enhance the overall customer experience and encourage active participation in providing feedback.

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