



IMPROVING CUSTOMER SATISFACTION with KAIZEN PHILOSOPHY

Elif Hümeýra ÖZMEN*

Muhammet Enis BULAK**

*Master's Student, Üsküdar University, Institute of Science, Department of Engineering Management, elifhumeyra.ozmen@gmail.com, ORCID: 0009-0007-4894-5811

**Assoc. Prof. Dr., Üsküdar University, Faculty of Engineering and Natural Sciences, Department of Industrial Engineering, muhammetenis.bulak@uskudar.edu.tr, ORCID: 0000-0003-3784-7830

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ABSTRACT

Today, customer expectations have increased and diversified due to reasons development of technology and the rise in living standards. To manage customer expectations, organizations need to understand what customers expect from them. Understanding can be achieved through means such as conducting market research, analysing customer feedback, and monitoring industry trends. Organizations that align their services with customer expectations can enhance customer experiences. Positive customer experiences enable organizations to gain a competitive advantage in the market, strengthen their image, and contribute to long-term relationships with customers. Therefore, customer satisfaction is important for organizations. Activities that organizations offer but do not create a value perceived by customers are a waste. Kaizen, a continuous improvement approach from Lean Management tools, purposes to eliminate waste, improve service quality, meet customer requirements, and optimize the system, in other words, to aim for perfection. In this study, a customer satisfaction survey is formed to measure customer satisfaction, evaluate service quality, and define operations that require improvement. To understand numerical data obtained from the survey answered by customers who purchased security services from the company, arithmetic mean and standard deviation values are calculated, and a statistical analysis is performed. Based on the analysis, processes that needed improvement were identified, and a Kaizen action plan was implemented to achieve improvements. The findings show that applying Kaizen at a securities firm increased customer satisfaction.

Keywords: Customer Satisfaction, Kaizen, Operational Efficiency, Service Quality, Statistical Analysis

JEL Clasifications: : L80, L23, M11, M31, C83

KAİZEN FELSEFESİ ile MÜŞTERİ MEMNUNİYETİNİN ARTIRILMASI

ÖZET

Bugün, teknoloji gelişimi ve yaşam standartlarındaki artış gibi sebeplerle, müşteri beklentileri artmış ve çeşitlenmiştir. Müşteri beklentilerini yönetebilmek için, organizasyonların müşterilerinin kendilerinden ne beklediklerini anlaması gerekmektedir. Bu anlayışa, pazar araştırmaları yaparak, müşteri geri bildirimlerini analiz ederek ve sektör trendlerini izleyerek ulaşılabilir. Hizmetlerini müşteri beklentileriyle uyumlu hale getiren organizasyonlar, müşteri deneyimlerini iyileştirebilirler. Pozitif müşteri deneyimleri, organizasyonların pazarda rekabet avantajı elde etmelerini, imajlarını güçlendirmelerini ve müşterilerle uzun vadeli ilişkiler kurmalarını sağlar. Bu nedenle, müşteri memnuniyeti organizasyonlar için önemlidir. Organizasyonların sundukları ancak müşteriler tarafından değer yaratılmayan faaliyetler, israflardır. Yalın Yönetim araçlarından biri olan Kaizen, israfı ortadan kaldırmayı, hizmet kalitesini iyileştirmeyi, müşteri taleplerini karşılamayı ve sistemi optimize etmeyi, diğer bir deyişle mükemmeliyeti hedeflemeyi amaçlar. Bu çalışmada, müşteri memnuniyetini ölçmek, hizmet kalitesini değerlendirmek ve iyileştirilmesi gereken operasyonları tanımlamak amacıyla bir müşteri memnuniyeti anketi oluşturulmuştur. Şirketten güvenlik hizmeti satın alan müşterilerin yanıtladığı anketten elde edilen sayısal verileri anlamak için aritmetik ortalama ve standart sapma değerleri hesaplanmış ve istatistiksel analiz yapılmıştır.



Yapılan analizler doğrultusunda, iyileştirilmesi gereken süreçler belirlenmiş ve Kaizen eylem planı uygulanmıştır. Bulgular, şirkette Kaizen uygulamasının müşteri memnuniyet oranını artırdığını göstermektedir.

Anahtar Kelimeler: Müşteri Memnuniyeti, Kaizen, Operasyonel Verimlilik, Hizmet Kalitesi, İstatistiksel Analiz
JEL Sınıflandırması: L80, L23, M11, M31, C83

1. INTRODUCTION

The security industry's competition and evolving customer expectations make continuous improvement essential. Lean Management and Kaizen enhance service quality, efficiency, and cost-effectiveness. This study evaluates customer satisfaction with company security services through a survey of 150 customers. Statistical analysis identifies dissatisfaction areas, guiding a Kaizen action plan. Rooted in the Toyota Production System (TPS), Lean Management eliminates waste and optimizes workflows. In services, it improves efficiency by refining processes and training employees. The study explores how company can apply Lean principles to enhance service quality, professionalism, and technology use.

1.1. Service sector

Service is defined as a whole set of benefits offered by one party to another, possessing an intangible nature, not resulting in ownership, and creating value for the purchaser (Parasuraman et al., 1985; Goetsch & Davis, 1998). From this perspective, service can be described as intangible products provided to people through human interaction, supported by machinery, and generating benefits (Biçki, 2016).

The service sector encompasses various industries and sub-sectors. Businesses engaged in service production are referred to as service enterprises, while the collective structure formed by all service enterprises is called the service sector. In the service sector, what is offered to the consumer is not a physical object but rather a function (Sayım & Aydın, 2011).

1.2. Service quality and customer satisfaction in service sector

Service quality has been defined in various ways. Edvardsson (1998) describes it as the ability to meet customer expectations and determine their needs, while Teas (1993) defines it as the comparison between actual performance and ideal standards. Parasuraman et al. (1985) explain service quality as the gap between expected service and perceived service performance (Gökdelen, 2007).

From these definitions, service quality directly reflects a business's operational success. The ultimate judge of service quality is the customer, making it crucial for service providers to differentiate themselves from competitors. While businesses may believe they offer excellent service, customer perception is the key determinant (Boone & Kurtz, 2000).

Customers, whether individuals, groups, or organizations, are the core of a business, even though they do not appear on financial statements (Yücel & Sayiner, 2018). Measuring service quality is essential for evaluating businesses from the customer's perspective, identifying areas for improvement, and enhancing competitiveness (Eleren & Kılıç, 2007).

This process helps determine service effectiveness, assess competitor performance, and implement targeted improvements, ultimately leading to a stronger corporate image, increased employee retention, and cost reductions (Koçbek, 2005).

The first studies on service quality measurement were conducted by Grönroos (1984), who defined it as the result of comparing customer perceptions with expectations (Banar & Ekergil, 2010). Surveys are the most widely used tool for measuring service quality, providing businesses with valuable data for evaluation and improvement (Sandıkçı, 2008; Eroğlu, 2005). Understanding customer needs and expectations is fundamental to achieving customer satisfaction (Kağınıcıoğlu, 2002).



Customer satisfaction results from comparing expectations with the actual service experience. Businesses consider two main approaches to customer satisfaction: a humanistic approach focused on social benefits and an economic approach aimed at growth and profitability (Kılıç, 1998). The process of creating customer satisfaction involves profiling customers, identifying their needs, measuring their perceptions, and developing an action plan.

Various methods, including focus groups, surveys, benchmarking, and mystery shopping, are used to assess customer satisfaction (Bakır, 2018). Among these, surveys are the most preferred tool, gathering extensive customer feedback on expectations, complaints, and service quality (Eroğlu, 2005).

Ultimately, businesses that improve service quality enhance customer satisfaction, which fosters loyalty and leads to increased sales.

1.3. Lean Management in service sector

Management is the process of effectively and efficiently utilizing human and non-human resources through planning, organizing, directing, and controlling to achieve organizational goals (Ülgen & Mirze, 2006). This process involves setting objectives, allocating resources, defining responsibilities, and ensuring operational harmony. If deviations from goals occur, their causes are identified, and corrective measures are taken.

With technological advancements, the service sector has rapidly evolved. Studies indicate that Lean Production methods, initially developed for manufacturing, are now applicable to service industries as well (Efe & Engin, 2012). Lean practices help managers navigate complexity and uncertainty by eliminating unnecessary activities and focusing on value-adding tasks (Can & Güneşlik, 2013). Lean thinking aims to enhance efficiency by minimizing resource use (labour, materials, equipment, time) while maximizing value for customers (Liu et al., 2013). The concept of "value" is defined as qualities customers desire and are willing to pay for (Aksoylu, 2014).

Lean management eliminates inefficiencies by utilizing technology and a skilled workforce, reducing hierarchy and decentralizing authority. It emphasizes achieving more with fewer resources in both manufacturing and services. According to Düren (2002), it follows five key principles: future foresight for planning, sensitivity to environmental changes, a holistic approach to business, dynamic resource utilization, and frugality to prevent waste and enhance efficiency.

A lean organization removes unnecessary steps and promotes continuous workflow, encouraging employees to develop through cross-functional teamwork. This approach aims to produce services with fewer resources while fostering motivation, rational initiatives, and efficient communication (Bateman & Snell, 2004).

For successful Lean Management implementation, businesses must undergo a structured process: planning change, identifying key success factors, and executing and measuring improvements (Čiarnienė & Vienažindienė, 2012). Companies should first recognize their need for transformation and ensure senior management support. Then, they must motivate employees, define roles, and establish methodologies for change.

Finally, they should eliminate waste, ensure continuous improvement, implement a pull system, work with multifunctional teams, and effectively use information systems to track progress.

1.4. Kaizen

Kaizen, a key concept in Japanese management, was developed in Japan after World War II. Masaaki Imai, the founder of the Kaizen strategy, describes it as the foundation of Japanese business success (Imai, 1997). Rooted in an ancient Japanese tradition, Kaizen is a



management philosophy that promotes continuous improvement in organizational processes while reducing waste (Çetinay, 2013). It opposes complacency and encourages ongoing progress at all levels.

Kaizen integrates various management concepts, including productivity, total quality management, product development, teamwork, zero defects, quality circles, Kanban, just-in-time production, and customer satisfaction (Kamaşoğlu, 2020). It fosters a team-oriented mindset by involving all employees in the improvement process. The term "Kaizen" is derived from "Kai" (improvement) and "Zen" (continuous), meaning continuous development (Ören, 2002). It operates on the principle that nothing is ever perfect; businesses must constantly improve to remain competitive (Karakaya, 2004).

A key feature of Kaizen is its problem-solving approach. Instead of ignoring issues, Kaizen focuses on identifying root causes and implementing preventive measures to ensure long-term solutions (Elvinaz, 2002). The philosophy distinguishes between process-oriented and result-oriented thinking, with an emphasis on long-term improvements over short-term gains. This strategic approach has given Japanese industries a strong competitive edge (Şimşek, 2001).

Kaizen not only emphasizes product quality but also human quality. It encourages employee participation in quality control through education and training, reinforcing the idea that quality starts with education and ends with control (Imai, 1997). The management's role is to foster a culture of continuous learning and motivation.

Businesses that fail to improve themselves risk being overtaken by more innovative competitors. Kaizen focuses on small, continuous changes that apply to business, social life, institutions, and even families (Monden & Hamada, 1991). Its fundamental principle is to never settle for the current state but to always strive for improvement. As part of Total Quality Management, Kaizen follows a structured approach: when a problem arises, expert teams analyse root causes and implement radical solutions with a zero-error mindset (Yamak, 1998).

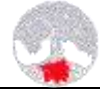
2. LITERATURE REVIEW

2.1. Lean Thinking, development, and principles

Lean Thinking focuses on eliminating waste to improve performance, productivity, and customer satisfaction. It streamlines processes and maximizes value across industries like manufacturing, healthcare, and finance. By enhancing agility and competitiveness, it reduces redundancy, optimizes asset use, and improves service quality and customer experience.

Lean Thinking is a strategy for continuous improvement and value creation, applicable across sectors (Congress, 2004). It eliminates non-value-adding activities, minimizes errors, and focuses on value optimization (Womack & Jones, 2007). Core principles of Lean Thinking:

- Defining Value: Value is defined from the customer's perspective, ensuring benefits exceed costs (Womack & Jones, 2006).
- Mapping Value Streams: Analyzing processes to eliminate inefficiencies and reduce waste (Adalı et al., 2016; Özçelik & Cinoğlu, 2013).
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- Continuous Flow: Ensures smooth processes without delays, maintaining quality and adapting to customer demands.
- Pull-Based Production: Production starts based on customer demand, reducing overproduction and inventory costs (Gökçe, 2006).
- Pursuing Perfection: Aiming for zero defects to enhance quality and customer satisfaction (Şeker, 2016).



Originating from Toyota Production System (TPS), Lean Thinking focuses on value creation and waste reduction, enhancing productivity and customer satisfaction.

2.2. Lean production: concept, development, and techniques

Lean production focuses on maximizing efficiency by producing more in less time with lower inventory, fewer employees, and reduced capital investment. Its core principles are meeting customer demands while minimizing waste and errors to enhance product quality (Özçelik & Cinoğlu, 2013). Lean manufacturing, introduced in *The Machine That Changed the World* (Womack, Roos, and Jones, 1990), was based on Toyota's Production System (TPS), which emphasized flexibility, lower costs, and higher quality through Just-in-Time (JIT) production (Par, 1998). Lean Production techniques:

- Kanban System: A pull-based system that uses cards to ensure production occurs only when there is demand, reducing inventory and improving flow (Suzaki, 2005).
- Kaizen and Quality Circles: Kaizen promotes continuous improvement, while Quality Circles involve employees in improving productivity and quality (Bayazıt, 2001; Hacıhasanoğlu, 2014).
- Just-in-Time (JIT): JIT minimizes waste by producing only the necessary quantities at the right time, reducing large inventories and ensuring timely material flow (Dekier, 2012).
- 5S: A methodology for organizing and cleaning workspaces, which enhances safety, efficiency, and quality control (Bayazıt, 2001).

These techniques help businesses streamline operations, reduce waste, and improve customer satisfaction, enabling them to remain competitive (Şeker, 2016).

2.3. Lean Management, development, and relationship with other concepts

Lean Management extends Lean Production by focusing on customer value and needs rather than pushing predetermined products. It originated in the production sector, with early developments by Henry Ford and Alfred Sloan after the First World War, and later advancements by Eiji Toyoda and Taiichi Ohno at Toyota after the Second World War (Womack, Jones, and Roos, 1990).

Initially applied in automotive production, Lean principles spread to manufacturing and services due to rising labour costs, technological advancements, and customer-centric approaches. Lean Management emphasizes expert teams, decentralized decision-making, and horizontal structures for quick problem-solving (Wynne & Marovac, 1993).

It focuses on reducing waste, improving customer satisfaction, and prioritizing long-term relationships. Lean practices promote teamwork, employee ownership of tasks, and flexible processes with minimal hierarchy and rapid decisions (Wynne & Marovac, 1993). Today, Lean Management is used across various industries to improve productivity and focus on customer needs.

2.4. Transition from Lean Production to Lean Management

Effective Lean Management relies on human resource management, emphasizing job satisfaction, teamwork, and process ownership. Teams must focus on continuous improvement, waste reduction, and clear communication for quick problem resolution. The Just-In-Time concept ensures quality and efficiency in meeting customer needs (Wildemann, 1995).

Lean prioritizes team collaboration, eliminating non-value-adding processes, and adjusting management practices to avoid disruptions. It encourages solving root causes to prevent recurring issues and adapts to customer needs, aiming for zero defects and fast error resolution (Miller, 1998; Yalın & Zirve, 2004).



2.5. Historical development of Kaizen, process improvement and techniques

Kaizen is a Japanese philosophy focused on continuous, small improvements in business, relying on teamwork and employee involvement to enhance quality and productivity over time (Abdilmouti, 2015). It originated after World War II, influenced by Total Quality Control and Total Quality Management, and spread to various sectors, including healthcare and education (Imai, 1997).

Kaizen is widely used to improve processes, eliminate waste, and increase productivity. It's commonly applied in manufacturing, where it improves product quality, reduces costs, and boosts efficiency (Bessant et al., 1993). Kaizen has also proven successful in services and healthcare, improving employee engagement and operational efficiency (Sarı, Genç, & Doğan, 2016; Imai, 2012). Companies like Toyota and Johnson & Johnson have benefited from its incremental improvements, leading to cost savings and increased productivity (Abdilmouti, 2015; Tanner & Roncarti, 1994). Kaizen's flexibility and focus on long-term improvements make it valuable for success and competitiveness (Vo et al., 2019).

Process improvement focuses on enhancing organizational efficiency, effectiveness, and adaptability by identifying inefficiencies, eliminating waste, and optimizing workflows to create value. In today's competitive environment, it is vital for operational excellence and sustainability.

Rooted in quality management, methodologies like Lean, Six Sigma, and Kaizen emphasize continuous improvement, problem-solving, and employee engagement, leading to increased productivity, cost reduction, improved customer satisfaction, and alignment with strategic goals.

Key principles include value stream mapping, continuous improvement, Lean thinking, Six Sigma, benchmarking, process mapping, root cause analysis, Total Quality Management, Key Performance Indicators (KPIs), and change management. These concepts help organizations streamline operations, improve efficiency, and stay competitive.

Kaizen, meaning "continuous improvement," is a methodology focused on small, incremental changes that improve efficiency, quality, and reduce waste. Initially developed for manufacturing, it is now applied across industries like services and healthcare. The core principle is that consistent improvements by all employees lead to long-term benefits. Key principles include:

- Employee Involvement: Encouraging employees to identify inefficiencies and propose solutions.
- Customer-Oriented Approach: Enhancing customer satisfaction through better products and services.
- Elimination of Waste: Reducing unnecessary activities and costs.
- Continuous Learning: Fostering adaptability and a learning culture.

Tools used in Kaizen include the PDCA cycle, 5S methodology, value stream mapping, Ishikawa diagrams, standard work, and Kaizen events.

Benefits of Kaizen include increased efficiency, higher employee morale, enhanced customer satisfaction, and sustainability.

A prime example is Toyota, where Kaizen has minimized production errors, reduced costs, and boosted employee satisfaction, making it a leader in global manufacturing.

2.6. Kaizen application examples in different industries

Kaizen, focused on continuous improvement, has been successfully applied across various industries, driving efficiency, cost savings, and improved quality. Key examples include:



Manufacturing: Toyota used Kaizen in the Toyota Production System (TPS) to reduce waste and enhance quality. General Electric applied Kaizen to identify waste, reduce downtime, and improve maintenance, lowering costs.

Healthcare: Cleveland Clinic reduced emergency department wait times, improving patient satisfaction. Virginia Mason Medical Center streamlined administrative processes to improve care delivery.

Service: McDonald's optimized kitchen workflows and supply chain, improving service speed and sales. Amazon enhanced logistics, reducing order fulfilment times and boosting delivery reliability.

Education: Hanyang University improved enrolment and scheduling efficiency. University of Michigan enhanced classroom management and teaching methods for better learning experiences.

Retail: Walmart applied Kaizen to inventory management, reducing excess stock and improving availability. Zara used Kaizen to improve design, manufacturing, and distribution, enabling fast adaptation to trends.

Kaizen's flexibility helps organizations achieve sustained efficiency, cost control, and customer satisfaction, fostering long-term success and competitiveness.

2.7. Summary of findings from literature review

Research shows that Kaizen and Business Process Improvement (BPI) have led to significant transformations across industries. Kaizen's focus on small, incremental changes improves efficiency, reduces costs, and enhances quality. Its emphasis on employee involvement and waste reduction supports sustainable growth.

Beyond cost savings key insights and practices:

- Experts like Davenport (1993), Hammer (1990), and Porter (1985) highlight the importance of continuous process refinement for maintaining competitiveness.
- Kaizen is applicable in both manufacturing and service sectors.
- Toyota Production System (TPS): Reduced waste and enhanced production efficiency.
- Healthcare (Cleveland Clinic, Virginia Mason): Improved patient care and reduced waiting times.
- Walmart: Streamlined supply chain and inventory management, illustrating Kaizen's versatility.
- Kaizen fosters a culture of continuous learning and employee engagement.
- It leads to higher customer satisfaction, improved employee morale, and better adaptability to market changes.
- Kaizen drives ongoing innovation and process optimization, ensuring long-term competitiveness and sustainable growth.

3. METHOD and METHODOLOGY

3.1 Research design

This study uses a cross-sectional design, collecting data at a single point in time to assess customer satisfaction levels. It follows a descriptive approach, analyzing the current state of satisfaction among company clients. The quantitative method was chosen to gather measurable, objective data on customer satisfaction, service quality, professionalism, technological infrastructure, complaint resolution, and price-performance balance.

3.2 Sampling method and data collection procedure

A total of 150 customers who purchased security services from company participated in this study using convenience sampling. Data were collected through an online survey with a



five-point Likert scale (1 = strongly disagree, 5 = strongly agree) to measure participants' inclinations and minimize neutral responses, providing clearer insights into customer perceptions.

3.3 Survey questions

The following questions were used to assess various aspects of customer satisfaction:

1. General Satisfaction: How satisfied are you with the security service you receive?
2. Service Quality: How would you rate the performance of the security personnel in performing their duties?
3. On-Time Service: Are you satisfied with the security personnel being on duty on time?
4. Professionalism and Behaviour: Was security personnel respectful and polite when communicating with you?
5. Security Perception: Does the service provided provide you with a sufficient sense of security?
6. Communication: How would you rate the company's response rate to your problems and requests?
7. Complaint Resolution: How satisfied were you when your complaints or problems were resolved?
8. Meeting Expectations: To what extent does our security service meet your needs and expectations?
9. Continuity of Service: How satisfied are you with the uninterrupted and problem-free provision of security services?
10. Technological infrastructure: How would you rate the technological equipment and systems (e.g. cameras, alarm systems) used during security services?
11. Appearance of Security Personnel: What do you think about the security personnel's clothing and personal care?
12. Emergency Management: How would you rate the response of our security team during emergencies (e.g. theft, fire)?
13. Price-Performance Balance: How would you evaluate the price-performance balance of the service you received?

3.4 Statistical analysis methods

The collected survey data were analysed using various statistical methods. Descriptive statistics such as mean, standard deviation, and percentage distributions were calculated to summarize the general trends in customer satisfaction.

3.5 Ethical considerations and research limitations

This study adhered to ethical principles, obtaining informed consent and ensuring anonymity to protect privacy. With a sample size of 150, the findings may not fully represent all company customers. Additionally, customer satisfaction may vary over time due to external factors. Despite these limitations, the study offers a reliable approach to analysing customer satisfaction and implementing a Kaizen action plan.

4. FINDINGS

This section presents the key findings from the survey, highlighting customer feedback on various aspects of security services. The results provide insights into strengths and areas needing improvement, forming the basis for strategic recommendations.



4.1. Survey data analysis

The survey data were analysed to identify trends in customer satisfaction and service quality. The findings help determine the effectiveness of current practices and guide the development of targeted improvements.

Question 1. Comment: The low average score shows moderate satisfaction with the security service. While half of customers are satisfied, a significant portion is dissatisfied, indicating the need for improvements. Table 4.1 shows the survey analysis results.

Table 4.1: Analysis table of question 1 of the survey

Survey Item	Rating	Number of People	Percentage (%)	Mean	Standard Deviation
1. General Satisfaction	Very Satisfied (4)	22	14.5%	2.58	0.91
	Satisfied (3)	66	43.4%		
	Dissatisfied (2)	42	27.6%		
	Very Dissatisfied (1)	20	14.5%		

Question 2. Comment: The service quality appears to be at an average level. Many customers find the service sufficient, but a significant portion rates the quality lower. This indicates that quality improvements are important. Table 4.2 shows the survey analysis results.

Table 4.2: Analysis table of question 2 of the survey

Survey Item	Rating	Number of People	Percentage (%)	Mean	Standard Deviation
2. Service Quality	Very Good (5)	25	16.4%	3.28	1.15
	Good (4)	39	25.7%		
	Average (3)	53	34.9%		
	Poor (2)	23	15.1%		
	Very Bad (1)	10	7.9%		

Question 3. Comment: Regarding on-time service, about half of the customers are satisfied. However, the dissatisfaction rate is also high. This suggests that more attention is needed to ensure timely service. Table 4.3 shows the survey analysis results.

Table 4.3: Analysis table of question 3 of the survey

Survey Item	Rating	Number of People	Percentage (%)	Mean	Standard Deviation
3. On-Time Service	Very Satisfied (5)	32	21.1%	3.39	1.22
	Satisfied (4)	47	30.9%		
	Undecided (3)	34	22.4%		
	Dissatisfied (2)	27	17.8%		
	Very Dissatisfied (1)	10	7.9%		



Question 4. Comment: The professionalism and conduct of the security personnel were generally well-rated, though some customers feel staff attitude could be improved. Additional training may be needed in this area. Table 4.4 shows the survey analysis results.

Table 4.4: Analysis table of question 4 of the survey

Survey Item	Rating	Number of People	Percentage (%)	Mean	Standard Deviation
4. Professionalism	Always (5)	30	19.7%	3.53	1.08
	Most of the Time (4)	51	33.6%		
	Sometimes (3)	48	31.6%		
	Rarely (2)	15	9.9%		
	Never (1)	6	5.3%		

Question 5. Comment: The perception of security is not seen as sufficient by some customers. While some are satisfied with the security service, others feel concerned. This suggests that the security services need to be strengthened. Table 4.5 shows the survey analysis results.

Table 4.5: Analysis table of question 5 of the survey

Survey Item	Rating	Number of People	Percentage (%)	Mean	Standard Deviation
5. Security Perception	Absolutely Yes (5)	20	13.2%	3.02	1.33
	Yes (4)	46	30.3%		
	Undecided (3)	32	21.1%		
	No (2)	25	16.4%		
	Absolutely No (1)	27	19.1%		

Question 6. Comment: Customer feedback on communication speed is more negative. Only 23% feel they receive a fast response, while the rest report slower reactions. This suggests that customer service needs to be faster and more efficient. Table 4.6 shows the survey analysis results.

Table 4.6: Analysis table of question 6 of the survey

Survey Item	Rating	Number of People	Percentage (%)	Mean	Standard Deviation
6. Communication	Very Fast (5)	16	10.5%	2.95	1.07
	Fast (4)	19	12.5%		
	Average (3)	74	48.7%		
	Slow (2)	27	17.8%		
	Very Slow (1)	14	10.5%		



Question 7. Comment: There is general satisfaction with complaint resolution, but about 21% remain dissatisfied. Faster and more effective solutions to customer complaints could improve service quality. Table 4.7 shows the survey analysis results.

Table 4.7: Analysis table of question 7 of the survey

Survey Item	Rating	Number of People	Percentage (%)	Mean	Standard Deviation
7. Complaint Resolution	Very Satisfied (5)	31	20.4%	3.48	1.16
	Satisfied (4)	53	34.9%		
	Neutral (3)	36	23.7%		
	Dissatisfied (2)	22	14.5%		
	Very Dissatisfied (1)	8	6.6%		

Question 8. Comment: The service's ability to meet expectations is notable, especially with 26% of responses stating, "partially meets." Customers are expecting a more satisfying experience. Table 4.8 shows the survey analysis results.

Table 4.8: Analysis table of question 8 of the survey

Survey Item	Rating	Number of People	Percentage (%)	Mean	Standard Deviation
8. Meeting Expectations	Fully Meets (5)	21	13.8%	3.22	1.14
	Meets (4)	43	28.3%		
	Partially Meets (3)	48	31.6%		
	Does Not Meet (2)	28	18.4%		
	Does Not Meet at All (1)	10	7.9%		

Question 9. Comment: There is general satisfaction with service continuity, but the dissatisfaction rate is still notable. Improvements can be made in ensuring consistent service delivery. Table 4.9 shows the survey analysis results.

Table 4.9: Analysis table of question 9 of the survey

Survey Item	Rating	Number of People	Percentage (%)	Mean	Standard Deviation
9. Continuity of Service	Very Satisfied (5)	23	15.1%	3.32	1.17
	Satisfied (4)	55	36.2%		
	Neutral (3)	33	21.7%		
	Dissatisfied (2)	30	19.7%		
	Very Dissatisfied (1)	9	7.2%		

Question 10. Comment: There is a mixed opinion on technological infrastructure. A high number of "average" and "poor" responses suggest that technological improvements are necessary, and the security systems need modernization. Table 4.10 shows the survey analysis results.

**Table 4.10: Analysis table of question 10 of the survey**

Survey Item	Rating	Number of People	Percentage (%)	Mean	Standard Deviation
10. Technological Infrastructure	Very Good (5)	26	17.1%	3.16	1.29
	Good (4)	41	27%		
	Average (3)	39	25.7%		
	Poor (2)	24	15.8%		
	Very Poor (1)	20	14.5%		

Question 11. Comment: The appearance of security personnel has been generally evaluated positively. However, a small portion is dissatisfied with their appearance. This suggests that staff training and visual standards should be reviewed. Table 4.11 shows the survey analysis results.

Table 4.11: Analysis table of question 11 of the survey

Survey Item	Rating	Number of People	Percentage (%)	Mean	Standard Deviation
11. Appearance of Security Personnel	Very Good (5)	34	22.4%	3.72	1.04
	Good (4)	65	42.8%		
	Average (3)	39	25.7%		
	Poor (2)	5	3.3%		
	Very Poor (1)	7	5.9%		

Question 12. Comment: The success rate of emergency interventions is generally positive, but a significant portion is still expecting improvements in emergency management. This indicates the need for strengthening training programs and intervention processes. Table 4.12 shows the survey analysis results.

Table 4.12: Analysis table of question 12 of the survey

Survey Item	Rating	Number of People	Percentage (%)	Mean	Standard Deviation
12. Emergency Management	Very Successful (5)	24	15.8%	3.31	1.09
	Successful (4)	38	25%		
	Average (3)	61	40.1%		
	Unsuccessful (2)	19	12.5%		
	Very Unsuccessful (1)	8	6.6%		

Question 13. Comment: The price-performance balance also shows mixed opinions among customers. Many are uncertain if the price justifies the service provided. This suggests a review of pricing and service balance is necessary. Table 4.13 shows the survey analysis results.

**Table 4.13: Analysis table of question 13 of the survey**

Survey Item	Rating	Number of People	Percentage (%)	Mean	Standard Deviation
13. Price-Performance Balance	Very Good (5)	21	13.8%	3.24	1.11
	Good (4)	42	27.6%		
	Average (3)	53	34.9%		
	Poor (2)	25	16.4%		
	Very Poor (1)	9	7.2%		

General comment of the survey results: The survey results reveal that company security services have both strengths and weaknesses across various areas. Overall, many aspects of the service remain at an average level of customer satisfaction. Areas where customers are dissatisfied primarily include service speed, quality, and price-performance balance, indicating that improvements should be made in these areas.

4.2. Service improvement suggestions

General Satisfaction: 43.4% of participants are satisfied, while 27.6% are dissatisfied. The average score is **2.58** (low average). Recommendations:

- Regular feedback can be collected to improve customer satisfaction, focusing on areas with increasing negative comments.
- Services causing dissatisfaction should be reviewed, and personalized services and complaint resolution processes should be improved.
- Increasing the number of personnel can help ensure service continuity and meet customer expectations.

Service Quality: 34.9% rate the service as "average." The average score is **3.28** (moderate). Recommendations:

- Staff training and supervision can be strengthened to ensure security personnel perform their duties more effectively.
- Continuous training programs and periodic performance evaluations can be conducted to improve service quality.

On-Time Service: 22.4% of participants are neutral, while 17.8% are dissatisfied. The average score is **3.39** (moderate). Recommendations:

- Delays in security personnel arrival can be improved by enhancing staff tracking and task distribution.
- Staff can receive training on time management, and an incentive system can be established for punctuality.

Professionalism: 33.6% of participants find the staff mostly professional, while 9.9% find them rarely professional. The average score is **3.53** (moderate). Recommendations:

- Training on professional customer relations can be provided to staff.
- Regular training sessions can enhance employees' communication skills.

Security Perception: 19.1% believe the service does not provide security. The average score is **3.02** (low). Recommendations:

- Security measures can be increased and made more visible.
- Participants can be provided with more frequent security reports to enhance the perceived security level.



Communication: 48.7% receive service at an average speed, while 28.3% consider it slow. The average score is **2.95** (moderate-low). Recommendations:

- A communication infrastructure (live support, dedicated customer representatives) can be established to ensure complaints and requests are resolved quickly.
- Response time targets can be set and periodically reviewed to enhance customer satisfaction.

Complaint Resolution: 23.7% of participants are neutral, while 14.5% are dissatisfied. The average score is **3.48** (moderate). Recommendations:

- A complaint resolution team can be formed to handle complaints more efficiently.
- A complaint tracking system and more solution options can be introduced to speed up resolution processes.

Meeting Expectations: 31.6% of participants believe the service partially meets expectations, while 7.9% think it does not meet expectations at all. The average score is **3.22** (moderate). Recommendations:

- The service can be restructured to meet expectations comprehensively, particularly improving the quality of security services.
- Customers can be provided with clearer service expectations, ensuring better alignment with delivered services.

Continuity of Service: 21.7% of participants are neutral, while 19.7% are dissatisfied. The average score is **3.32** (moderate). Recommendations:

- Increasing the number of personnel and taking special measures during holiday periods can ensure uninterrupted service.
- Staff turnover and backup plans can be implemented to prevent disruptions in security services.

Technological Infrastructure: 25.7% rate the technological infrastructure as average, while 15.8% rate it as poor. The average score is **3.16** (moderate). Recommendations:

- Investing in next-generation security systems can enhance technological infrastructure.
- Regular maintenance and updates of technological equipment can improve efficiency.

Appearance of Security Personnel: 42.8% of participants rate the appearance of security personnel positively. The average score is **3.72** (good). Recommendations:

- Appearance standards for security personnel can be established and strictly enforced.
- Higher-quality uniforms can be provided for security personnel.

Emergency Management: 40.1% of participants rate emergency management as average. The average score is **3.31** (moderate). Recommendations:

- More comprehensive emergency drills can be conducted, and staff can receive regular emergency management training.
- Emergency equipment can be updated and used more frequently.

Price-Performance Balance: 34.9% of participants rate price-performance balance as average. The average score is **3.24** (moderate). Recommendations:

- Clear explanations regarding price-performance balance can be provided to customers to increase transparency.
- New service packages aligned with customer expectations can be created to improve price-performance balance.

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4.3. Kaizen action plan and implementation steps

Based on the findings of the general customer satisfaction survey conducted with company customers, a Kaizen-based action plan was developed to improve service performance. The action plan focuses on the main problem areas identified in the survey, such as general satisfaction, service quality, security perception and communication. The implementation steps follow the PDCA (Plan-Do-Check-Act) cycle to ensure continuous improvement.

Identifying Key Problem Areas: The survey results revealed the following key issues:

- Low General Satisfaction (43.4% satisfied, 27.6% dissatisfied, avg. score: **2.58**)
- Moderate Service Quality Perception (avg. score: **3.28**)
- Low Security Perception (19.1% believe security service is inadequate, avg. score: **3.02**)
- Inefficient Communication (28.3% find communication slow, avg. score: **2.95**)
- Weak Complaint Resolution Process (14.5% dissatisfied, avg. score: **3.48**)

Enhancing Customer Satisfaction:

- Introduce a structured customer feedback system with real-time monitoring of complaints and service issues.
- Focus on service areas with high dissatisfaction rates and develop customized solutions.
- Improve complaint resolution speed by establishing a dedicated complaint handling team.

Improving Service Quality and Professionalism:

- Strengthen employee training programs, especially in customer relations and professional conduct.
- Implement a performance evaluation system for security personnel, including regular assessments.
- Introduce a reward system for employees who demonstrate outstanding service quality.

Strengthening Security Perception:

- Increase visible security measures (e.g., more frequent patrols, improved security presence).
- Provide customers with periodic security reports to improve transparency.
- Upgrade security equipment and ensure regular maintenance of technological infrastructure.

Optimizing Communication and Complaint Resolution:

- Implement a dedicated customer support line and live chat service for faster response times.
- Set specific targets for response times and monitor communication efficiency.
- Develop a digital complaint tracking system to improve resolution rates.

Implementing the PDCA (Plan-Do-Check-Act) Cycle:

- Plan: Set improvement targets based on survey results (e.g., increase overall satisfaction by 15%).
- Do: Implement pilot projects such as real-time feedback systems, training programs, and enhanced monitoring.
- Check: Evaluate progress through follow-up surveys and customer feedback.
- Act: Expand successful improvements to all operational areas and refine strategies continuously.



Employee Involvement and Continuous Training:

- Conduct Kaizen workshops to encourage employee participation in the improvement process.
- Establish a suggestion system where employees can propose service enhancements.
- Provide ongoing training in customer interaction, emergency response, and efficiency improvement.

Monitoring Progress and Ensuring Sustainability:

- Develop a Key Performance Indicator (KPI) dashboard to track improvements.
- Conduct quarterly reviews of service quality, security perception, and complaint resolution efficiency.
- Maintain continuous feedback loops between customers, employees, and management to ensure long-term success.

By implementing these Kaizen-based action steps, company can systematically improve service efficiency, enhance customer satisfaction, and maintain a high level of security service quality.

4.4. Kaizen action plan feasibility and expected outcomes

The feasibility of the proposed Kaizen action plan was evaluated based on organizational resources, operational constraints, and potential resistance to change. The key factors influencing feasibility include resource availability, employee readiness and training capacity, scalability and operational adaptation, risk assessment:

- The action plan requires additional personnel recruitment to enhance service continuity, as indicated by the 19.7% dissatisfaction rate regarding service continuity.
- Investments in technology infrastructure upgrades (such as surveillance systems and communication tools) are essential, aligning with the 15.8% of respondents rating the current technological infrastructure as low.
- Budget constraints may impact the speed of implementation, requiring phased investments.
- Professionalism and communication training must be enhanced, considering that only 33.6% of participants find security personnel highly professional.
- Time management and service punctuality need to be improved, given that 17.8% of respondents are dissatisfied with on-time service delivery.
- Structured training programs can be integrated without major operational disruptions, ensuring a smooth transition.
- The proposed measures, including personalized customer service and systematic complaint resolution, can be gradually expanded across different company branches.
- Feedback mechanisms and digital reporting tools will allow for adaptive improvements in service strategies.
- Resistance to change from security personnel may occur, especially regarding new training programs and performance evaluations.
- Service disruptions during the implementation phase must be mitigated through phased rollouts and pilot programs.
- Customer trust may initially be impacted by transition adjustments, requiring transparent communication.

Expected Outcomes of the Kaizen Implementation:

Based on the survey findings and the proposed Kaizen strategies, measurable improvements are expected in higher customer satisfaction levels, improved service quality and



professionalism, enhanced operational efficiency and on-time service, stronger perceived security and risk management, higher employee, engagement and lower turnover, better price-performance balance perception

- Addressing service dissatisfaction (currently 43.4% satisfied, 27.6% dissatisfied) through better customer engagement and feedback-driven improvements.
- Implementing a structured complaint resolution system to reduce dissatisfaction rates by at least 10% within the first year.
- Faster response times in addressing service issues, improving the communication satisfaction score from 2.95 to above 3.50.
- Enhancing personnel training to increase the perceived professionalism score from 3.53 to 4.0.
- Continuous monitoring and evaluation programs will reinforce high service standards, targeting a 15% improvement in service ratings.
- Reducing lateness issues by optimizing shift scheduling and introducing a performance-based reward system.
- Ensuring at least a 20% reduction in delays reported by clients, improving the on-time service rating from 3.39 to at least 3.75.
- Increasing visible security measures to improve the security perception score from 3.02 to 3.50 or higher.
- More frequent security drills and transparency in incident reports to build client trust.
- Implementing career development and training incentives to reduce turnover rates.
- Establishing clear promotion paths to improve motivation and overall job satisfaction.
- Adjusting service packages to better match customer expectations, improving the price-performance rating from 3.24 to at least 3.50.
- Offering customizable security solutions to address specific client needs, ensuring at least a 10% improvement in price-related satisfaction.

By implementing these Kaizen-driven strategies, company can achieve sustainable growth, enhance its market reputation, and position itself as a leader in security services. The long-term impact of these improvements will be monitored through continuous feedback collection and performance evaluations.

5. CONCLUSION

This study evaluated Lean Management strategies in company security operations, using customer survey data to identify strengths and areas for improvement. A Kaizen-based action plan was developed to address key issues and drive continuous improvement. The survey showed that while 43.4% of customers were satisfied, 27.6% expressed dissatisfaction, highlighting the need for service enhancements. The Kaizen plan prioritizes structured feedback, faster complaint resolution, and real-time monitoring to improve customer satisfaction. Moderate service quality (mean score: 3.28) suggests room for improvement, which will be addressed through employee training, performance evaluations, and a reward system.

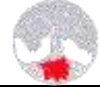
With a security perception score of 3.02, the plan includes increasing patrols, upgrading equipment, and providing periodic security reports to build customer trust. Inefficient communication (mean score: 2.95) emerged as a key issue, prompting plans for a dedicated support line, live chat service, and a digital complaint tracking system. While complaint resolution was rated moderately well (mean score: 3.48), a specialized team and faster resolution strategies will further enhance this aspect.



The Kaizen plan follows the PDCA (Plan-Do-Check-Act) cycle to ensure systematic improvement. Targets include a 15% satisfaction increase, pilot programs for feedback systems and training, and follow-up surveys to assess progress. Employee involvement is crucial, with workshops and a suggestion system fostering participation. To sustain improvements, a KPI dashboard will track service quality, security perception, and complaint resolution efficiency, with quarterly reviews for continuous refinement. By implementing these measures, company aims to enhance service efficiency, customer satisfaction, and overall security service quality through a structured, data-driven approach.

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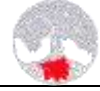
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