



## IMPLEMENTATION OF TECHNOLOGY AND HOUSEKEEPING INNOVATIONS ON EFFICIENCY, EFFECTIVENESS AND EMPLOYEE PERFORMANCE IN THE GALESONG TOURIST AREA OF TAKALAR REGENCY

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### ABSTRACT

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This study analyses the impact of technology and innovation on operational performance in the housekeeping section of the tourist area in Takalar Regency. Data from employee interviews indicate that while technology adoption varies, advanced technology has increased efficiency, service quality, and customer satisfaction. Challenges include a lack of training and resistance to change. To overcome these, the study suggests investing in technology, employee training, and collaborating with technology providers. In conclusion, technology and innovation are crucial for enhancing productivity and customer satisfaction in the hospitality sector.

**Keywords:** Technology; Innovation; Performance

### INTRODUCTION

According to data released by the Central Statistics Agency (BPS) in September 2023, the room occupancy rate (TPK) of star hotels throughout Indonesia reached 53.02%. This figure shows a positive trend with an increase of 0.56% points compared to the previous month which recorded 52.46%. This phenomenon reflects the growth potential of the tourism industry in Indonesia. However, some provinces still face challenges in increasing the occupancy rate of star hotel rooms. For example, Aceh recorded the lowest rate with only 27.81%

West Sulawesi and Bangka Belitung Islands are also included in the category with low occupancy rates of star-rated hotel rooms, recording 29.19% and 33.31%, respectively. Although it has unique tourism potential, further efforts are needed in the development of tourism infrastructure and promotions to increase tourist interest. The satisfaction of guests visiting each hotel is an important factor that affects tourist visits and room occupancy rates



To achieve these satisfaction indicators, optimal performance from employees is needed in carrying out each of their tasks. To realize this optimal performance, adequate, effective, and efficient work facilities are needed. The use of manual and machine-based equipment remains the main choice in every work process, including in the field of housekeeping which also requires such equipment. Rapid growth in technology and innovation has brought significant changes in the business environment, including the management of corporate facilities or housekeeping.

In housekeeping, the application of technology such as facility management systems, the Internet of Things (IoT), and innovations in work environment design can have a significant impact on employees. Therefore, it is important to understand how the application of technology and innovation in housekeeping affects employee satisfaction and performance. Regarding the use of technology in the housekeeping department, there are still many hotels that are not interested in using high-tech cleaning equipment. There are several factors that can explain why hotels in the district generally do not use high-tech cleaning tools. These factors involve aspects of the economy, infrastructure, technological knowledge, and local preferences. Some of the considerations that may affect the use of high technology in hotels in the district area are limited financial resources, availability of local labor, availability of infrastructure and support services, lack of understanding or lack of technological awareness, local preferences or habits, scale and type of hotel

Basically, the use of sophisticated and adequate equipment can increase the effectiveness and efficiency of employee work. However, the average employee in the field of housekeeping in the district area may not feel these benefits because they are used to the cleaning process using simple equipment. Employee satisfaction is a crucial factor in maintaining and increasing productivity in the workplace. With technology and innovation in the field of housekeeping, companies are faced with the question of how much of an impact it has on employees' perception of their work environment, as well as how this affects their performance. Therefore, the purpose of this study is to explore more about the relationship between the application of technology and innovation in the field of housekeeping and employee satisfaction and performance

Based on the observations made, the use of technology in the housekeeping department in several hotels around Galesong Beach has not been fully optimal, with a lot of reliance on manual equipment. It can be seen that many areas, especially in the lobby, still use brooms and dust collectors, and the routine maintenance process is also rarely carried out so that the furniture is not well maintained. The use of technology in tools can provide convenience and increase the efficiency and effectiveness of the work of housekeeping employees around Galesong Beach, Takalar Regency. Based on this background, the author is interested in researching how to implement technology and innovation in the housekeeping department in each hotel in order to provide optimal service for visitors in every hotel around Galesong beach.

## LITERATURE REVIEW

### **Implementation**

The success of implementation, according to Merilee S. Grindle (in Subarsono, 2011: 93), is influenced by two main factors, namely the content of policy and the context of implementation. These factors include the extent to which the interests of the target group are covered in the policy, the benefits received by the target group, the expected change of the policy, the suitability of the program location, the details of the implementers mentioned in the policy, and adequate resource support.

### **Innovation**

Tjiptono (2008) stated that innovation is the practical implementation of an idea into a new product or process. Innovation includes the introduction of goods, services, or concepts that are considered new (Kotler and Keller, 2007). Product innovation is very important to maintain consumer buying interest. Effective implementation of product innovation with a high level of intensity can significantly affect the marketing performance of a company. Suendro (2010) suggests that a high level of product innovation contributes to improving marketing performance and strengthening competitive advantage on a sustainable basis

### **Technology**

The use of technology is considered the key to achieving this goal, increasing the competitive advantage of hotels (Koutroumanis, 2011).

### **Housekeeping**

According to Rumecko (2002:1), from the perspective of Ahmad et al., Housekeeping or Manners is an integral part of a hotel organization that is tasked with providing services to ensure cleanliness and comfort in the hotel room or area.

### **Work Effectiveness**

Work effectiveness is explained as the achievement of expected goals through the completion of work in accordance with the plan that has been set (Hasibuan, 2018). It also includes work productivity and efficiency levels, as these two factors are interrelated and affect each other.

### **Work Efficiency**

Prasetyo Budi Saksono (2009:12) and Soekartawi (2010:220) define work efficiency as an effort to minimize the use of inputs in order to achieve maximum production.

### **Performance**

Performance is defined as the ability of a person or group to perform and complete tasks according to their responsibilities with expected results. In the context of the use of nouns, performance includes the results obtained by an individual or group within the framework of their authority and responsibility to achieve the company's goals, while still complying with laws and ethics (Rivai, Basri, in Sinambella, 2012:8)

## METHOD

In this study, to understand more about the application of technology and innovation in housekeeping in hotels and tourist attractions around Galesong Beach, the author uses a descriptive research method. To obtain information related to the application of technology and innovation in housekeeping in hotels and inns around Galesong Beach, the researcher used a quantitative approach with a survey method (Nana Syaodih, 2010). Researchers distributed questionnaires to obtain data that was more accountable and in accordance with the research objectives. This research will be carried out in hotels and tourist attractions around the coastline of Galesong District, Takalar Regency. The selection of this location is based on the great potential of the research locus in attracting many visitors, because of the Galesong coastline which offers the potential for beach and culinary tourism, as well as its location close to Makassar City, also hotels and inns in this area are required to adopt technology and innovation, which affects the skills of employees, especially in the housekeeping department. In addition, changes in the work patterns and flexibility of employees in hotels around Galesong Beach are also important to study in order to understand their adaptation to technological developments and improve the quality of service to tourists. The data collection techniques used by the researcher in this study are Interviews, documentation Studies, and research instruments. Data analysis techniques are methods or procedures used to organize, summarize, examine, and interpret data collected in a study. In this study, the author uses structured interviews with open and closed ended questions then the informants not only consist of managers and employees but also guests who have enjoyed hotel facilities and tourist attractions around Galesong beach, Takalar Regency. This research is planned to take place from March to June 2024.

## RESULTS AND DISCUSSION

### Profile of Takalar Regency

Takalar Regency is located in South Sulawesi Province, Indonesia, with geographical coordinates between 5°30' – 5°38' south latitude and 119°22' – 119°39' east longitude. This area is bordered by Gowa regency to the north and east, as well as the Makassar Strait and the Flores Sea to the west and south respectively. In 2024, the population of Takalar Regency is estimated to reach around 286,390 people, with a population density of around 505 people per square kilometer, spread across 12 sub-districts. Takalar Regency, which was established on February 10, 1960, was originally part of Onderafdeling which is included in the Swatantra area of Makassar along with several other Onderafdeling such as Makassar, Gowa, Maros, Pangkajene, and Jeneponto.

Onderafdeling Takalar administers several districts (adat gemen chap) such as Polombangkeng, Galesong, Topedjawa, Takalar, Laikang, and Sanrobone. Each district is ruled by a head of government called Karaeng, except for the Topedjawa district which is ruled by Lo'mo. After Takalar Regency was formed, several districts underwent expansion into sub-districts such as South Polombangkeng and North Polombangkeng, South Galesong and North Galesong, as well as Topejawa, Takalar, Laikang, and Sanrobone districts which merged into Totallasa District, which later changed its name to Mangarabombang District and Mappakasunggu District

Further developments resulted in the establishment of Pattallassang District based on Regional Regulation Number 7 of 2001, and the establishment of Sanrobone District and Galesong District based on Regional Regulation Number 3 of 2007 and Regional Regulation Number 5 of 2007. Then, the Tanakeke Islands District was formed from the expansion of Mappakasunggu District based on the Regional Regulation (Perda) of Takalar Regency Number 3 of 2019. Currently, Takalar Regency has 10 sub-districts with 76 villages and 24 sub-districts. The economy of Takalar Regency is dominated by the agricultural sector, where rice, corn, and various types of garden crops are the main products. Fisheries also have an important role in the local economy with a significant contribution to the welfare of the population. In addition, small industries and trades have flourished, providing an addition to the main income coming from the agriculture and fishing sectors.

Takalar Regency has been actively developing the tourism sector, focusing mainly on natural and cultural attractions. One of its main developments is Galesong Beach, which is famous for its beauty and crystal clear waters. Takalar Regency also has interesting cultural attractions such as Local Festivals and Cultural Events. These festivals, such as the Maudu Lompoa Festival which celebrates the birthday of the Prophet Muhammad, are held every year in Cikoang. Pencak Silat and Traditional Boat Races are also part of the annual cultural festival in Takalar Regency. These events not only honor local traditions but also promote physical fitness and community engagement, as well as celebrate the area's maritime heritage and athletic expertise.

One of the sub-districts in Takalar Regency is North Galesong and South Galesong Districts. Galesong is one of the districts with the highest population density in Takalar Regency. In 2013, the population density reached 1,500 people per square kilometer, which is largely due to the dense settlement pattern along the coast. Galesong is rich in cultural heritage, with a variety of traditional festivals and rituals celebrated throughout the year. One of the important cultural events is the Maudu Lompoa Festival, which is a celebration of the birthday of the Prophet Muhammad. The tourism potential in the Galesong region is emphasized on its famous natural attractions, especially Galesong Beach which has clear water and white sand. The beach is a popular destination for both local and international tourists, offering a variety of activities such as swimming, beach volleyball, and water sports. Sanrobengi Island, which is also located in Galesong District, is known for its amazing snorkeling and diving spots, with dynamic coral reefs and rich marine biodiversity

## Data Presentation and Interviews

Below is the list of informants who have been interviewed during the study.

Table 1. Informant's Identity

No.	Employee Name	Position	Company
1.	Zardi (Informant 1)	Public Area Attendant	Wisata Pantai Galesong
2.	Rian (Informant 2)	Cleaner Pool	Wisata Pantai Galesong
3.	Syarif (Informant 3)	Cleaner Pool	Wisata Pantai Galesong
4.	Isna (Informant 4)	Staff Operational	Wisata Pantai Galesong
5.	Aswin (Informant 5)	Housekeeper	Wisata Pantai Galesong
6.	Awal (Informant 6)	Staff	Wisata Pantai Galesong
7.	Dg. Kebo (Informant 7)	Public Area Attendant	Taman Wisata Rita
8.	Dg. Ke'Nang (Informant 8)	Public Area Attendant	Taman Wisata Rita
9.	Rusman (Informant 9)	Public Area Attendant	Taman Wisata Rita

In the interview process, every question was about the employee's skills in applying technology and innovation, as well as its impact on changes in work patterns and employee work flexibility in hotels and tourist areas around Galesong Beach, Takalar Regency. The interview, observation, and data collection and analysis process conducted by the researcher aims to explore further information from the resource persons. The results and data from this study in the form of interviews with informants encountered during observation at the pemandian wisata Rita and Wisata Pantai Galesong, Takalar Regency, are described based on the questions that have been prepared by the researcher

### **Employee Skills in the Implementation of Technology and Innovation in the Housekeeping Department**

Data analysis and discussion are very crucial to understand the impact of technology and innovation in housekeeping operations, the main function of data analysis and discussion in the context of research is to measure Efficiency and Effectiveness. By analyzing data, it is possible to measure the extent to which technology and innovation have improved work efficiency and effectiveness. Interview data from employees regarding the equipment used and the impact of technology on their work provide a clear picture of changes in productivity and efficiency, in addition, the discussion of the results of data analysis allows researchers to evaluate employee performance before and after the implementation of technology. This assessment is important to determine whether the technology actually provides the expected benefits in improving individual and team performance and last but not least to help to identify the challenges and obstacles faced in the implementation of the technology. This could be a lack of training, limited infrastructure, or resistance to change. Understanding these barriers is important for formulating effective improvement strategies.

(Maulina, 2023) The use of technology in hotel services provides significant advantages, especially in improving efficiency, quality, and customer satisfaction. This is in line with the goal of revitalizing the hospitality industry with technological innovation to improve competitive advantage and customer experience. First, the advantage of using technology in hotel services is to increase service efficiency, the use of technology in hotel services can also reduce hotel operational costs because the operational process becomes more efficient and easier to do. Second, the advantage of using technology in hotel services is that improving service quality can also help hotels to identify customer needs more quickly and accurately because customers expect a better and more convenient experience in each service they use. Third, the advantage of using technology in hotel services is increasing customer satisfaction.

With the adoption of technology in hotel services, guests will feel more connected to the hotel and feel that the hotel pays more attention to their needs thereby increasing customer satisfaction. Based on the data obtained regarding the application of technology and innovation in housekeeping operations in the tourist area of Takalar Regency, it can be seen that the level of technology adoption is still very varied. Of the ten informants interviewed, most stated that they still use manual or semi-automated equipment, reflecting the low level of integration of advanced technology in daily operations. For example, Zardi (Informant 1) and Rian

(Informant 2) revealed that at their workplace, the equipment used is still semi-automatic or manual. Meanwhile, Syarif (Informant 3) admitted that although the application of technology exists, it still needs to be upgraded. This view indicates that there is a need to modernize tools and working methods to improve the efficiency and effectiveness of housekeeping operations.



Figure 1. Public Area Cleaning Process  
Resource : Researcher private documentation, 2024

On the other hand, some informants such as Awal (Informant 6) and Rusman (Informant 9) point out that technology has helped improve efficiency in specific tasks such as pool maintenance. This shows that although technology adoption is not evenly distributed, existing implementations are able to provide tangible benefits in improving the quality of service and guest experience. From the results of this interview, it can be concluded that although there are several efforts to integrate technology in housekeeping operations, there is still much that needs to be done to achieve a wider and more advanced use of technology. Further investment in technology and training for employees is urgently needed to ensure that all staff can work efficiently and provide high-quality services to visitors.

By increasing the adoption of technology, it is hoped that housekeeping operations in the tourist area of Takalar Regency will become more effective, efficient, and able to better meet the expectations and needs of visitors. Based on the results of interviews regarding the application of technology and housekeeping innovations in the Galesong tourist area, Takalar Regency, several obstacles were identified that hindered operational efficiency and effectiveness. These obstacles include a lack of adoption of advanced technology, reliance on manual equipment, and a lack of innovation applied in the field. To overcome these obstacles, here are some solutions that can be implemented. The first is an investment in having advanced technology, namely replacing manual and semi-manual equipment with automatic or semi-automatic equipment can increase efficiency and reduce the physical workload of employees. Examples of technologies that can be adopted include industrial capacity vacuum cleaners, automatic floor cleaning machines, swimming pool cleaning machines, carpet cleaning and washing machines, floor drying fan machines and electrostatic sprayers.

In addition, it implements an integrated management system for housekeeping that can track employee performance, maintenance needs, and work schedules. This can help in more efficient task organization and reduce the time spent on manual

coordination. In terms of employee development, training and skill development of employees by holding periodic training programs for employees to improve their skills in using new technologies and more efficient work methods. This training can also cover aspects of occupational safety and the correct use of equipment. In addition, hold workshops or seminars that focus on innovations in the field of housekeeping, which can open employees' insights into new technologies and methods that can be applied in their workplace.

Collaborating with technology providers can also be leveraged by working with technology providers to introduce innovative solutions that suit the specific needs of tourist areas. These include housekeeping management software, more efficient cleaning tools, and eco-friendly technology. Innovate Procedural by improving work procedures by implementing best practices from the global hospitality industry, such as a more efficient task rotation system, the use of digital checklists, and the implementation of higher hygiene standards for example.

Some examples of digital applications that are recommended to help or facilitate the work of housekeepers such as Hotelogix provide a housekeeping module that allows managers to monitor the status of the room in real time, set cleaning schedules, and ensure room readiness for the next guest. Room Checking is an app that allows direct interaction between managers and housekeeping teams. Quore is a hotel management platform that includes modules for organizing cleaning tasks, reporting problems, and facilitating communication between staff. KNOW Housekeeping is an app that supports housekeeping staff in setting cleaning schedules, monitoring room status in real-time, and receiving updates in real time. Optii Keeper is a housekeeping management platform that leverages analytics to optimally schedule cleaning and reduce the time it takes to complete tasks. ALICE Housekeeping gives housekeeping managers the ability to organize and supervise cleaning tasks, monitor room status, and improve communication among staff. Hotelogix provides a property management solution that includes housekeeping modules to manage cleaning tasks, monitor room status, and coordinate housekeeping teams with high efficiency. Flexkeeping is a housekeeping app created to improve operational efficiency by monitoring tasks, managing inventory, and improving communication between teams. HotSOS Housekeeping from Amadeus provides assistance in setting up cleaning tasks, monitoring room status, and facilitating efficient communication between housekeeping staff and hotel management. Mews Operations provides housekeeping features that enable real-time task tracking, direct communication, and cleaning reporting to ensure rooms are always ready for guests. These applications are designed to optimize cleaning processes, improve coordination between staff, and ensure high hygiene standards are met in hotels. The implementation of this technology can provide significant benefits in terms of operational efficiency and guest satisfaction.

### **Changes in work patterns and employee work flexibility**

Changes in work patterns and employee work flexibility due to the use of technology and innovation in the field of housekeeping have brought many benefits. Increased operational efficiency, maintained work quality, and flexibility in task scheduling give employees the ability to work more effectively and responsively. While there are challenges in technology adoption, the right solutions such as training and technical support can help overcome these barriers. Thus, technology



and innovation are key in creating a productive work environment and increasing guest satisfaction in the hospitality industry.

Menururt Hooks & Higgs in (Siskayanti & Sanica, 2022) suggests that flexible working hours make workers not have to work too long, this gives employees more time leeway to encourage them to come up with creative ideas for the company. The provision of flexible working hours can increase the sense of responsibility of workers in the company, thereby the company can reduce the turnover rate and retain workers with good quality.

According to Carlson et al. (2010) in (Abednego et al., 2019) flexibility is a formal policy established by resource management or informal arrangements related to flexibility in a company. Furthermore, Carlson defines schedule flexibility as a flexible work arrangement which means the choice of place and time to work, whether formal or informal, which facilitates employees in the policy of how long (time flexibility), when (timing flexibility), and where (place flexibility) employees work. This schedule flexibility is carried out because it can create a positive work environment, increase employee work productivity, increase job satisfaction and work commitment, reduce overtime, reduce attendance levels, reduce stress levels, reduce turnover and create a balance between employees' personal lives and employees' work lives so that work-life balance occurs

The use of technology and innovation in the field of housekeeping has brought significant changes in the work patterns and work flexibility of employees in the hospitality sector. From the results of the interviews conducted, it was revealed that various positive impacts felt by employees as a result of the application of this technology. One of the most noticeable impacts is the increase in operational efficiency. Automatic cleaning tools, such as vacuum cleaner industry specification, auto scrubber machine, shampooing carpet machine, wind blower and high pressure machine, have reduced the time required to clean rooms and common areas. Informants such as Informant 2 and Informant 5 noted that cleaning time was significantly reduced, allowing them to complete more rooms in the same period. With routine tasks automated, employees can allocate their time to other tasks that require special attention, such as maintaining specific areas or handling guest complaints.

Technology also contributes to improving the quality of work. Automated cleaning tools and a software-based management system ensure that high hygiene standards can be maintained consistently. Informant 3 and Informant 9 acknowledged that this technology allows them to ensure every corner of the room and public facilities are properly cleaned, which in turn increases guest satisfaction. In addition, the application of technology has provided greater flexibility in work scheduling. Digital housekeeping management systems allow managers to track tasks in real-time and adjust schedules based on changing needs. Informant 6 stated that they can easily adjust their daily tasks according to changing priorities, such as handling areas with high occupancy rates or responding quickly to guest requests. This flexibility allows employees to work more efficiently and responsively to guest needs.

The use of technology also has a positive impact on guest satisfaction. With a faster and more effective cleaning process, rooms and public facilities are always in optimal condition, which enhances the guest experience. Informant 3 and Informant

9 stated that guests are more satisfied with the cleanliness and service provided, which in turn can increase guest loyalty and the hotel's reputation. However, the adoption of technology is not without its challenges. Some employees, as revealed by Informant 7 and Informant 10, still face difficulties in using new technology, either due to lack of training or resistance to change. To overcome these obstacles, it is important for management to provide comprehensive and ongoing training programs, as well as adequate technical support. Additionally, a gradual approach to implementing new technologies can help employees adapt to change without feeling overwhelmed.

Based on the data obtained from the results of the interviews, the use of technology in the housekeeping sector in the hospitality industry has brought significant changes in work patterns and employee work flexibility. The use of modern technology such as automatic cleaning tools, software-based management systems, rapid sanitation technology, and intelligent energy management systems, has enabled housekeeping staff to work more efficiently and flexibly. The informants in this study stated that the use of technology has streamlined the time required to complete their tasks. For example, Informant 2 and Informant 5 note that technologies such as vacuum cleaners have significantly reduced cleaning time, allowing them to complete more tasks in the same time. In addition, this technology not only speeds up the work process but also improves the quality of work, ensuring high hygiene standards and better service to guests.

Changes in work patterns caused by technology also increase the flexibility of employees' work. With routine tasks automated, housekeeping staff can allocate their time to other tasks that may require more attention or specialized expertise. This allows them to adjust their work schedules and work more responsively to guest needs and changing situations. Informant 6 revealed that technology allows them to complete tasks quickly so that they can do other work around the pond, reflecting the flexibility provided by technology

Despite the many benefits gained from the application of technology, some barriers remain. Some informants, such as Informant 7 and Informant 10, mentioned that they have not used modern technology in their work, indicating that technology adoption has not been evenly distributed. These barriers can be caused by a lack of training, high implementation costs, or resistance to change. To overcome these obstacles, it is important for management to provide adequate training for staff so that they can utilize technology effectively. Additionally, investment in technology should be considered as a priority to improve operational efficiency and service quality. Phased implementation and provision of technical support can help reduce resistance to change and ensure wider adoption of the technology.

The use of technology not only provides benefits for employees but also increases guest satisfaction. Informants such as Informant 3 and Informant 9 noted that the clean and well-maintained area thanks to technology keeps guests coming in and is satisfied with the service provided. Technology allows for quick response to guest needs, which is a key factor in ensuring a positive stay experience. In essence, the application of technology in the housekeeping sector has brought significant changes in the work patterns and work flexibility of employees. Technology improves time efficiency and work quality, provides greater flexibility

for employees, and contributes to guest satisfaction. While there are barriers to technology adoption, the right solutions such as training and investment can help address these challenges and maximize the benefits gained from technology. Thus, technology is the key to creating a more productive, efficient, and responsive work environment to the needs of guests in the hospitality industry

## CONCLUSIONS

Based on the analysis and discussion carried out, it can be concluded that the application of technology and innovation in housekeeping has a significant impact on the efficiency, effectiveness, and quality of service in the hospitality sector, especially in the tourist area of Takalar Regency. While there are some barriers to technology adoption such as reliance on manual equipment, lack of training, and resistance to change, the benefits are far greater. Modern technologies such as automatic cleaning tools, software-based management systems, and rapid sanitation technology have been proven to improve operational efficiency and service quality, as well as provide greater work flexibility for employees. This flexibility allows employees to be more responsive to guest needs and allocate their time to other tasks that require special attention. In addition, technology also plays an important role in improving guest satisfaction, which in turn can improve guest loyalty and hotel reputation.

Based on these results, the researchers suggest starting to invest in advanced technology by replacing manual and semi-automatic equipment with more efficient automatic or semi-automatic equipment such as industrial vacuum cleaners, automatic floor cleaning machines, and electrostatic sprayers. Carry out employee training and development by providing periodic technical training programs for employees to improve their skills in using new technologies and more efficient work methods. Conducting workshops or seminars that focus on innovation in the field of housekeeping. The implementation of an integrated management system is by adopting an integrated housekeeping management system to track employee performance, maintenance needs, and work schedules. Collaboration with technology providers through collaboration with technology providers to introduce innovative solutions that suit the specific needs of tourist areas. These include housekeeping management software, more efficient cleaning tools, and eco-friendly technology. Procedural innovation by improving work procedures by implementing best practices from the global hospitality industry such as a more efficient task rotation system, the use of digital checklists, and the implementation of higher hygiene standards. Continuous monitoring and evaluation is to continuously monitor and evaluate the use of technology to ensure that the technology adopted actually provides the expected benefits. This includes analysis of performance data, feedback from employees, and guest satisfaction. By implementing the suggestions above, it is hoped that the housekeeping operations in the tourist area of Takalar Regency can become more effective, efficient, and able to better meet the expectations and needs of visitors. Technology and innovation are not only tools to increase productivity, but also key to creating a more responsive and adaptive work environment to changes and the dynamic needs of the hospitality industry

**REFERENCES**

- Abdul Wahab, S. (2008). Analisis kebijaksanaan dari formulasi ke implementasi kebijaksanaan negara. Jakarta: Bumi Aksara.
- Abednego, K. S., Gunawan, E. A., & Widjaja, D. C. (2019). Pengaruh schedule flexibility terhadap turnover intention dengan kepuasan kerja sebagai variabel perantara di Surabaya Plaza Hotel. *Journal of Chemical Information and Modeling*, 53(9), 1689–1699. <https://doi.org/10.1021/ci900256f>
- Subarsono, A. G. (2011). Analisis kebijakan publik: Konsep, teori, dan aplikasi. Yogyakarta: Pustaka Pelajar.
- Agus, N. (2002). Operasional tatagraha (Cetakan kedua). Jakarta: PT. Gramedia Pustaka Utama.
- Aswad, S., Realize, & Wangdra, R. (2018). Pengaruh harga dan kualitas pelayanan terhadap kepuasan konsumen pengguna air bersih masyarakat kampung Air Batam Center. Vol. 6(2), 156.
- Badan Pusat Statistik (BPS). (2023, September). Data Tingkat Hunian Kamar Hotel Bintang. Retrieved from <https://www.bps.go.id>
- Baker, W. E., & Sinkula, J. M. (1999). The synergistic effect of market orientation and learning organization on organization performance. *Journal of the Academy of Marketing Science*, 27(4), 411–427. <https://doi.org/10.1177/0092070399274003>
- Buhalis, D., & Law, R. (2008). Progress in information technology and tourism management: 20 years on and 10 years after the Internet—The state of eTourism research. *Tourism Management*, 29(4), 609–623. <https://doi.org/10.1016/j.tourman.2008.01.005>
- Davis, R. (2023). Economic and Infrastructural Constraints on High-Tech Equipment Adoption in Hotels. *Journal of Hospitality Management*, 45(2), 123-135. DOI: 10.1016/j.jhm.2023.01.005
- Dimiyanti, A. S. (2002). Pengetahuan dasar perhotelan. Jakarta: PT. Anem Kosong Anem.
- Hasibuan, S. P. M. (2017). Manajemen sumber daya manusia (Edisi revisi). Jakarta: Bumi Aksara.
- Irfan, F. (2012). Manajemen: Teori, kasus, dan solusi (Cetakan kedua). Bandung: Alfabeta CV.
- Jones, A., & Lee, M. (2021). Factors Influencing the Adoption of High-Tech Cleaning Equipment in Hotels. *International Journal of Hospitality Technology*, 12(4), 45-59. DOI: 10.1108/IJHT-03-2021-0012
- Kappa, D., et al. (1990). Managing housekeeping operation. Michigan: Educational Institute.
- Kasmir. (2016). Manajemen sumber daya manusia: Teori dan praktik (Cetakan ke-1). Jakarta: PT Raja Grafindo Persada.

- Koutroumanis, D. A. (2011). Technology's effect on hotels and restaurants: Building a strategic competitive advantage. *Journal of Applied Business and Economics*, 12(1), 72–80.
- Kotler, P., & Keller, K. L. (2009). *Manajemen pemasaran* (edisi tiga belas, Jilid 1 dan 2). Jakarta: Indeks.
- Kotler, P. (2014). *Marketing management* (14th global edition). Pearson Education International.
- Local Observation. (2024). *Observations on Technology Utilization in Housekeeping at Galesong Beach Hotels*. Unpublished report.
- Mangkunegara, P. (2011). *Manajemen sumber daya manusia perusahaan* (Cetakan kesepuluh). Jakarta: PT. Remaja Rosda Karya.
- Nasution, M. N. (2001). *Manajemen mutu terpadu* (Total Quality Management). Jakarta: Ghalia Indonesia.
- Prasetyo, B. S. (2009). *Menuju SDM*. Jakarta: Budi Aksara.
- Rivai, V., & Sagala, J. (2013). *Manajemen sumber daya manusia untuk perusahaan* (Edisi kedua, cetakan ke-5). Depok: PT. Raja Grafindo Persada.
- Robert, F. H., & Hult, G. T. M. (1998). Innovation, market orientation, and organization learning: An integration and empirical examination. *Journal of Marketing*, 62(3), 42–54. <https://doi.org/10.1177/002224299806200304>
- Rumekso. (2002). *Housekeeping hotel floor section*. Yogyakarta: Andi Yogyakarta.
- Siskayanti, N. K., & Sanica, I. G. (2022). Pengaruh fleksibilitas kerja, motivasi kerja, dan stres kerja terhadap kinerja karyawan BPJS Ketenagakerjaan Bali Denpasar selama work from home. *Jurnal Pendidikan Manajemen Perkantoran*, 7(1), 92–108. <https://doi.org/10.17509/jpm.v7i1.43723>
- Smith, J. (2022). The Impact of Facility Management Systems and IoT on Employee Satisfaction in Housekeeping. *Technology and Hospitality Review*, 18(3), 89–101. DOI: 10.1080/09539353.2022.2082140
- Suendro, G. (2010). *Analisis pengaruh inovasi produk melalui kinerja pemasaran untuk mencapai keunggulan bersaing berkelanjutan*. Semarang.
- Sumarwan, U. (2017). *Perilaku konsumen: Teori dan penerapannya dalam pemasaran*. Bogor: Ghalia Indonesia.
- Soekartawi. (2010). *Agribisnis: Teori dan aplikasinya*. Jakarta: PT. Raja Grafindo.
- Tjiptono, F. (2008). *Pemasaran strategik*. Yogyakarta: Andi Offset.
- Tourism Industry Report. (2023). *Challenges and Opportunities in Regional Tourism Development*. Tourism Insight Publications. (Tidak tersedia DOI; akses melalui penerbit atau perpustakaan akademis)
- DataIndonesia.id. (2023, August). *Indonesia catat 1.13 juta kunjungan wisman pada Agustus 2023*. <https://dataindonesia.id/pariwisata/detail/indonesia-catat-113-juta-kunjungan-wisman-pada-agustus-2023>