



# How to Improve Employee Performance Management for Small and Medium-Sized Enterprises in the Agro-Tourism Sector Based on Service 4.0

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## ABSTRACT

The goal of this study is to assess the efficacy of an employee performance management model for five small and medium-sized firms in the agrotourism industry based on prior research findings. It is critical to boost local and international visitor interest in agrotourism in Indonesia, particularly in West Bandung Regency. This research examines the changes in employee performance before and after the model's implementation, as well as how far service 4.0 may supplement the employee performance management model. This study employs a qualitative approach. The findings show that there are favourable changes in employee performance based on supervisor evaluations of numerous workers and visitor assessments of service quality for all employees. After four months of using the employee performance management model, the four research items improved employee performance. Another finding suggests that while the use of technology in the industrial age 4.0 can aid employees' job, the quality of agrotourism services (particularly in terms of employee initiative and friendliness toward guests) cannot be substituted by digitalization.

**Keywords:** *Employee Performance Management; Service 4.0; Performance Appraisal, Small and Medium-Sized Enterprises*

## 1. INTRODUCTION

SMEs confront a significant difficulty in utilizing their people resources to encourage organizational innovation and, as a result, achieve greater corporate performance [1]. When pursuing innovation inside their organization, SMEs' managers must grasp how to actually organize their human resources or apply innovation-oriented procedures. As a result, managers should be able to use HRM as a genuine leveraging tool [2]. This research builds on prior research that produced the Employee Performance Management Model for Small and Medium-Sized Enterprises in the Agrotourism Sector in West Bandung Regency [4]. The model combines human resource management (especially employee performance management) with service marketing, and more particularly service quality. At the stage of defining performance, there is a Key Performance Indicator for service quality in the model, so that staff may be instructed to work at a more professional level to increase overall performance. This

is aimed to boost global competitiveness, particularly among ASEAN Economic Community members (AEC).

In the era of the Industrial Revolution 4.0, industrial technology has developed astoundingly and produced many valuable benefits for humans, so that human life and work are now increasingly dependent on technology. Energy and human energy as well as certain physical and intellectual skills can already be replaced with technology, better known as artificial intelligence (AI). The main purposes of the creation of technology is to multiply human capabilities, expand work-related networks, reduce costs, facilitate work and human effort, and others. Companies need to adapt to changing times. This article intends to determine the extent to which small and medium-sized business enterprises from the agrotourism service sector can implement Service 4.0 in conducting employee performance management and improving services.

Based on the results of previous research conducted at 5 small and medium-sized enterprises of the agrotourism sector, most of these are still managed

simply and informally so that the applications of performance management are still inadequate; since some have employees with primary education levels along with low job maturity and psychological maturity, limited funds, and relatively low levels of openness and competition, they are neither ready to maintain global standards, nor prepared to send their employees to follow the certification of tourism-sector professionals, that is to say at the level of globalization of the ASEAN Economic Community (AEC). As a result, most of the research objects still do not meet the AEC standard [4].

Until far, no publication has reviewed the applicability of employee performance management techniques to small and medium-sized firms in the agrotourism industry. The model's application is meant to evaluate the model's success, to determine whether there is an increase in employee performance after the model has been applied for 4 months, and whether there is a need to enhance the model. Furthermore, the purpose of this essay is to examine how the application of industrial-era Technology 4.0 might supplement the performance management paradigm in order to improve staff performance (particularly enhancing visitor service quality) and boost visitor happiness.

## 2. METHOD

This study uses a mixed method, which is a quantitative method complemented by qualitative methods in the form of in-depth interviews and observations to complete the analysis. Data collection is limited to December 2019. The data collected are as follows. 1) In-depth interviews are conducted to familiarize the owners and/or managers of agrotourism enterprises with the performance management model, to explain its application in the field as well as the possibilities and constraints of applying it to improve employee competency. 2) Furthermore, this study tries to explain to the managers about the questionnaire which is employed to assess every employee's service quality to visitors before and after 4 months application of the performance management model (Table 1). The performance evaluation form employs a graphic rating scale [3]. Performance appraisals from superiors and consumers are evaluated whether there are changes in employee attitudes and behaviour during the work process, especially service quality towards consumers, before and after 4 months applying the model. 3) And then to discuss how far Service 4.0 could support the performance management model. 4) Direct observations were made on agrotourism locations.

**Table 1** Employee Service Quality Performance Assessment

Time : Unit / department name:	Employee name: Assessor :	Assessment				
		1	2	3	4	5
<b>SERVICE QUALITY PERFORMANCE</b>		Less than satisfactory	Satisfactory	Almost good	Good	Very good
<b>TANGIBILITY:</b> physical manifestations that can be observed by the five senses (attitude, behaviour, process)						
1	Employee appearance					
2	Body language					
<b>EMPATHY:</b> ability to understand / pay attention to consumers (attitude, behaviour, process)						
3	Friendliness, employee courtesy					
4	Staff pay attention to the needs of tourists and offer personal assistance					
5	Employee relations with tourists					
6	Employee communication with tourists					
<b>RELIABILITY:</b> accurate provision of promised services and accountability (attitude, behaviour, process, results)						
7	Accuracy and responsibility for providing information from employees					
8	Effectiveness and efficiency of service procedures (timely service)					
9	Overall product quality					
10	Overall service quality					
<b>ASSURANCE:</b> knowledge, skills, abilities, attitudes, employee behaviour guaranteeing that tourists are free from danger, risk and doubt (attitude, behaviour, process, results).						
11	Knowledge					
12	Abilities					
13	Skills					
14	Attitudes and behaviour					
15	Guaranteed tourist safety					
<b>RESPONSIVENESS:</b> responsiveness and speed help proportionally in providing the right services and services (attitude, behaviour, process, results).						
16	Employee Initiative helps tourists overcome confusion and problems					

Time :	Employee name:					
Unit / department name:	Assessor :					
<b>SERVICE QUALITY PERFORMANCE</b>	<b>Assessment</b>					
	1	2	3	4	5	
	Less than satisfactory	Satisfactory	Almost good	Good	Very good	
17	The alertness and speed of employees responding to the needs and complaints of tourists					
18	Speed of solving problems					
19	The presence of employees when needed					
	Total					
Before applying the model: Average value = $\frac{\quad}{19} =$		After applying the model: Average value = $\frac{\quad}{19} =$				
Change:						
Notes: 1-1.5.0 = less than satisfactory, 1.6-2.5 = sufficient, 2.6-3.5 = almost good, 3.5-4.5 = good, 4.6-5.0 = very good						

The questionnaire regarding visitor perceptions of the service quality of employees is also the same as the questionnaire used by superiors for performance appraisal. The difference is that there is no first and last two rows.

### 3. RESULT AND DISCUSSION

#### 3.1. Results

Employee performance management must be in line with the company's strategic planning. Performance management is aimed at improving performance. Strategic planning will not be achieved without a contribution to employee performance. The purpose of agrotourism is to satisfy visitors so that they have a very positive experience, are eager to revisit the agrotourism enterprise, refer agrotourism to their closest relatives, and invite them to visit the agrotourism location together.

Agrotourism companies as one of the sectors in service companies really need commitment to managing human resources, especially frontline staff, because 1) Human resources are a core part of products. Service employees are the most conspicuous elements that play a key role in the service sector; 2) Human resources deliver and increase service quality and satisfy customers, and are a decisive factor in the competitive advantage of the company because it will be difficult for competitors to imitate high quality performance of human resources; 3) Human resources form a representation of the company. From a consumer perspective, employees are the service company; 4) Human resources constitute a brand, because they determine whether the service is delivered according to the brand and promotion; 5) Human resources affect agrotourism sales. 6) Human resources determine and increase productivity; 7) Human resources build relationships with consumers and create consumer loyalty.

Employee performance management of agrotourism is very important in the process of improving employee performance. Service employees must maintain their satisfaction, loyalty and productivity because these are influential factors in sending service delivery to

customers and determine customer satisfaction. Therefore, the employee performance management model incorporates key performance indicators of service quality into the first stage of defining employee performance. To observe employee performance output, it is necessary to know the extent to which employees can improve service quality to visitors. So that in order to compare the changes before and after the application of the model, the authors also use a questionnaire covering the performance of the service quality of employees to visitors. The performance appraisal aspects consist of processes, behaviours and results (quantitative and qualitative). According to [4], the aspect of performance appraisal is related to service quality. Empathy refers to the ability of employees to understand and pay attention to consumers related to attitudes, behaviours, and processes. Reliability is based on providing services and services that are promised accurately and can be accounted for, which are related to attitudes, behaviour, processes, and results. Assurance consists of knowledge, skills, abilities, attitudes, good behaviour on the part of employees in providing assurance and maintaining consumer confidence, so that anyone who buys services there will be handled by the right person. This is related to attitudes, behaviour, processes, and results. Responsiveness represents the desire and speed of employees in helping proportionally to provide the right services and services, which are related to attitudes, behaviours, processes, and results. Tangibility also relates to humans not as much as other service qualities. Human tangibility comprises appearance and body language. Both of these are related to attitudes, behaviour and processes.

Agrotourism company owners have implemented a performance management model by completing each stage in the performance management cycle so that performance standards become clearer, each employee's performance becomes more organized, recorded, monitored and controlled, service to visitors is better (especially in terms of initiative and hospitality), and it is clear what must be addressed in the performance appraisal utilization stage. Based on the evaluation of performance changes before and after the

implementation of the performance management model, the following is the average increase in service quality performance in the four research objects after 4 months of applying the employee performance management

model, based on direct assessment from supervisor to several employees, and based on visitor's assessment of changes in the service quality of overall employees.

**Table 2** Average Increase in Service Quality Performance in Four Agrotourism Locations

No	Agrotourism	Assessment from direct supervisor		Assessment from customers	
		Number of employee	Average changes in service quality performance (%)	Number of respondents	Average changes in service quality performance (%)
1	A	9	+2.85	38	+2.00
2	B	10	+7.55	35	+5.50
3	C	10	+9.52	36	+7.20
4	D	6	+14.43	35	+10.12

In A, B, C, and D, the average rise in service quality performance happened from the smallest order to the largest. Service 4.0 refers to the technology and ideas of service and support function companies that are built on disruptive technological concepts such as the Internet of Things (IoT) and the Internet of Services (IoS). It enables service businesses to improve their efficiency and effectiveness. Technology 4.0 can be achieved in service firms only if the product used is a 4.0 product. Meanwhile, agrotourism service products cannot fully implement 4.0 Technology because visitors need direct interaction and are satisfied by employees. The decision to use Technology 4.0 lies in the realm of leadership,

especially for use in marketing and finance. Employees are trained to use technology.

From the four research objects, A is the closest to the model, followed by B, C and D. The number of visitors in the period between 2017 and 2018 is shown in table 6 below. The number of visitors has increased over a period of 2 years, namely 2018 and 2019. The largest increase occurred in A, followed by D, B and C. Many factors contributed to the increase in the number of visits. One of them is through employee performance management in producing agrotourism output in the form of goods and services. Other factors that can increase the number of visits include price, business location, and promotions.

**Table 3** Number of Visits in 2018 and 2019

No	Name agrotourism company	Number of visits (people)		Increase
		2018	2019	
1.	A Lembang	54,831	71,397	29.8%
2.	B	3,200	3,727	16.5%
3.	C	140,018	142,184	1.5%
4.	D Lembang	128,927	153,324	18.9%

### 3.2. Discussion

From the results of the previous research [5], the model is distinguished by red and black. The set of data originating from the demand side is marked in red, while data originating from the supply side is marked in black. In this study, the employee performance management model will be equipped and updated again in green colour for evaluation of its application, and in blue colour for the possible use of Service 4.0 technology, in table 4 to table 8.

Agrotourism owners can start with the simplest, such as logging staff attendance using a fingerprint identification system or online. Digitalization is also employed in video, performance recording, online applications, WhatsApp, Line, Instagram, and email. Each section's performance is tailored to the standard operating procedure. They adhere to the premise that what is written is done, and what it does is written. Agrotourism should consider purchasing a recording

device for each unit, and the head of the unit should report it to the administration team every night through email or WhatsApp. This study provides a link of similar google form to managers and visitors, containing service quality indicators to be filled in by managers and visitors before and after 4 months of model application.

This includes online daily reporting of stock and sales used to measure production and marketing team work. Several CCTV units need to be installed at the cashier, café, and the production section, which are useful tools to monitor team performance.

Face-to-face communication between managers and staff is more successful in creating a more harmonious relationship, improving mutual understanding, developing trust, and reinforcing overall performance. Performance recording offers one input for performance measurement. By analysing previous performance, the manager and employee can evaluate the benefits and drawbacks of employee performance.

**Table 4** Stage 1 Planning for performance

No	Activities	Explanation
1.	Confirmation of strategic plan	Vision, mission, strategy, goals.
2.	Identify Key Success Factor (KSF)	Have a certain uniqueness of agrobusiness products, regional customs, to attract local and foreign tourists.
3.	The process of making plans	Past performance evaluation, competition anticipation, routine and non-routine job identification, top-down and elaborated at operational level, instruction and briefing, assignment of priority task scale.
4.	Plans	Job description + valid indicators (loading factor>0.5), job specification + valid indicators (loading factor>0.5), job performance standard, performance management plan, identify routine and fluctuating jobs, Critical Success Factor (CSF), Key Performance Indicator (KPI) for tangibility, empathy, reliability, assurance, and responsiveness, each has valid indicators (loading factor>0.5) and reliable (probability< 01), responsiveness most influences satisfaction, valid satisfaction indicators (loading factor>0.5) and <i>reliability</i> (probability<0.01).
5.	Form of plans	Oral, written (paper and digitalization)
6.	Office media	Letters, forms, paper or on-line reports, finger print machine. record attendance online, CCTV, video, email, WhatsApp, Line, Instagram, similar google form to be filled in by managers and visitor.
7.	Place	Each block
8.	Period	Differentiating between managerial and operational work, permanent employees, casual workers.
9.	Actors involved	Owner, supervisors, employees, colleagues from different departments.

**Table 5** Stage 2 Monitoring Performance

No	Activities	Explanation
1.	What is monitored	Processes, behaviours, results.
2.	Monitoring methods	Increase monitoring to give better service quality to visitors : informally, feedback, coaching, counselling, on-the job training, mentoring, lure of incentives / wages.
3.	Actors involved	Employees, direct supervisors, owner, feedback from visitors.
4.	Monitoring time	Every day, every week, based on timetable / volume of work.
5.	Monitoring place	As per work requirement.
6.	Monitoring media	Written, oral, recording, CCTV, finger print identification, WhatsApp, Line, Instagram, email.
7.	Valid indicators of monitoring (loading factor>05)	Guidance, motivation.

**Table 6** Stage 3 Measuring Performance

No	Activities	Explanation
1.	Input of performance appraisal	Implementation and performance results, latest reports, time tables, on-line applications, recording, CCTV, fingerprint identification, video, email, Line, WhatsApp, Instagram, google form from managers and visitors.
	Purpose of performance appraisal	Improve performance, ensure successful work, rewards, promotions.
2.	Administrative procedures	According to the needs.
	Familiarization with performance appraisal	According to the needs.
3.	Performance appraisal method	Interviewing, coaching, counselling, discussion, monitoring, inspection, communication way, how to assess good and bad performances.
4.	Media of performance appraisal	Office documents and or non-documents.
5.	Aspects, standards and values of performance appraisal	Aspects assessed are results, behaviours, processes. For standards and values, there are differentiations based on manager level, operational level of primary and secondary education.

No	Activities	Explanation
6.	Valid performance appraisal indicators (loading factor>0.5)	Objectives, aspects and measures are clear and complete, the ratter is capable and fair, standards are communicated, preparing supportive office media.
7.	Period of performance appraisal	Based on the timetable of each project, there is a differentiation between freelancers and permanent employees.
8.	Actors involved	Direct supervisor, mutual cross-check in weekly discussions, visitors.
9.	Output of performance appraisal	As expected, or not, what factors are inhibiting or supporting good performance.

**Table 7** Stage 4 Performance Measurement Feedback

No	Activities	Explanation
1.	Performance appraisal feedback method	Discussion, interview, coaching, counselling, determining performance correction of how good and how bad performances are, on-line feedback from managers and visitors.
2.	Actors involved	Employee, direct supervisors, owner, visitors.
3.	Timing of performance appraisal feedback	Anytime, every day/every briefing, every week, according to the time table, distinguishing between freelancers and permanent employees.
4.	Valid indicators of performance feedback (loading factor>0.5)	Quickly, employees understand.

**Table 8** Stage 5 Performance Reinforcement and Utilization of Performance Measurement

No	Activities	Explanation
1.	Determine rewards for good performance Determine punishment for poor performance	Distinguishing between permanent employees and freelancers. Given fairly, it can be a warning, warning letter, demotion, pay checks, getting tired, not paying attention, punishing those who fail to give good service quality to visitors.
2.	Utilization of performance appraisal to improve functional areas of human resource management	<ul style="list-style-type: none"> <li>- Standard of Operating Procedure for performance appraisal system</li> <li>- Recruit new employees with job specifications required by agrotourism.</li> <li>- Employee promotion</li> <li>- Update KPI</li> <li>- Foreign language course for tour guides</li> <li>- Correct the system of rewards and punishment.</li> <li>- Update, improve and develop digitalization for better performance.</li> <li>- Train and familiarize employees with digital work to support individual and company performance.</li> <li>- Continue on-line applications to receive/elicite direct feedback from managers and visitors, looking for solutions if there are complaints from visitors about employee performance and company performance</li> </ul>
3.	Valid indicators of reinforcing performance and utilization of performance appraisal to improve functional areas of human resource management (loading factors> 0.5)	Rewards and punishment are given fairly, there are implications of performance appraisal of employment decisions.

#### 4. CONCLUSION

This experimental study is useful for evaluating and completing the model after being implemented for 4 months, and knowing how far the possible use of service 4.0 technology can support agro-tourism performance. The closer to the model, the smaller the increase in service quality performance. The further away from the model, the greater the increase.

Improving service quality is very important in providing a good experience for visitors. So that feedback from visitors is very important for agro-tourism to evaluate the extent of employee performance in providing quality services to visitors, because employees deliver services and satisfy visitors directly.

The modification of the new model in this study is the result of discussion and complements the previous model so that it is expected to be more effective and efficient in its application. One of the biggest modifications of the

model is that managers and visitors are asked to rate the service quality performance of employees using a similar google form. This is very useful to evaluate employee performance. Based on assessment data from superiors and visitors, the application of the model for 4 months has proven to be successful in improving employee performance. Agro-tourism needs to improve service quality, especially from visitors to employees,

In general, digitization cannot be utilized optimally in small and medium-sized agrotourism businesses. Visitors come to agrotourism to do, see, and buy agro-tourism goods, which include (1) agricultural products that can be sold or just displayed for tourists to enjoy, and (2) tourism-related services. As a result, technology cannot replace hospitality and service in this setting. Tourist pleasure is dependent on warm, welcome smiles, greetings, salutations, etiquette and sophisticated manners, character, initiative, quickness in reacting to consumer requirements and aspirations, civility, and communication, none of which can be substituted by technology or robots.

So far, digitization has played a significant role in supporting and assisting owners and managers. Technology is commonly employed in agrotourism marketing and finance because it improves labor efficiency and coordination. It is beneficial to advertise the film on YouTube and other websites, including promoting local cultures, which is crucial for becoming a local attraction and promoting the uniqueness of agro-tourism goods, which may boost the number of visitors and online sales. Another example is videotaping tour guides, who are vital in explaining and educating guests. The films may be used to evaluate the performance of tour guides as well as promoted by displaying them in videos on YouTube and websites. Digitalization has become a valuable instrument in human resource management to assist and support defining performance, monitoring performance, performance assessment, particularly from managers and visitors, and performance appraisal utilization, all of which serve to sustain or create excellent performance. Due of the restricted quality of human resources, most owners have their own challenges in adopting digitalization to boost company. This research addresses one of the owner's needs by using social media to gather direct input from visitors regarding staff and company performance. Owners should create and optimize social media tools for monitoring, assessing, training, and developing staff performance.

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Non-digital staff are employed in the agrotourism business because they must serve guests personally and satisfactorily. They are only somewhat connected to digital labor since they give a variety of services to visitors through interacting, talking, and persuading in order to achieve visitor happiness. They do not use a lot of digital work or digital staff management.

Employee performance in small and medium-sized agrotourism operations may be enhanced using the performance management approach described above, in accordance with agrotourism companies' strategic planning. The establishment of a performance management model for employees of small and medium-sized firms in the agro-tourism sector is intended to boost local and international visitors' satisfaction and interest in visiting agro-tourism in Indonesia.

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