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Improving Quality of Wedding Event Management to Reduce Common Mistakes at Mahar Agung Organizer Using the Six Sigma Method

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A B S T R A C T

This research aims to improve the quality of wedding event management at Mahar Agung Organizer using Six Sigma and DMAIC. The data used in this research is data on the number of events managed by Mahar Agung from 2021 to 2023. At the define stage, it was found that the type of defect that most often occurred at wedding events was events that did not run according to the rundown. At the measure stage, the DPMO value was obtained at 103,552 with a sigma value of 2.762. From the results of the analysis using a cause-and-effect diagram, it was found that several main factors caused defects in wedding event operations, including additional events outside the runway, delays in the arrival of vendors or guests, poor communication and crowded guests. In the improve stage, improvements were made to the process to obtain a DPMO value of 23,809 and a sigma value of 3.481, where there was an increase in the sigma value of 0.719. Improvements in service quality are carried out by providing training to official crew, details in event guidebooks, as well as improving communication methods so that the number of errors or defects can continue to decrease

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INTRODUCTION

Nowadays, the wedding service industry has grown over time. Many people prefer to use wedding services at a wedding organizer in carrying out their wedding ceremony. The role of a wedding organizer is considered to help make it easier to plan, organize, and carry out a wedding event. Nowadays, wedding organizer companies are required to be more competitive in order to compete in the market. One of the things that can influence this competition is the quality or quality of services that can fulfill consumer desires (VOC).

Previous professional experience is one of the factors for consumers in choosing a wedding organizer. Quote from kompasiana.com (2020), if the selection of a wedding organizer is not right and far from professional, then the wedding that will be carried out will be a problem and will have a very big impact. When the experience of a wedding organizer is good, the quality of service owned by the wedding organizer is proven to be good.

Supardi (2022) says that quality control can not only be done by manufacturing companies or those that produce products in the form of goods, but in service companies quality control can be done to improve the quality of service services with the aim of meeting customer desires. To carry out control in improving the quality of the service process, the six sigma method can be used. Six Sigma can be used to measure the process in achieving the perfect end goal, which is indicated by a value of 3.4 Defects Per Million Opportunities (DPMO). According to Gaspersz (2008), Six Sigma is a continuous improvement effort to reduce defects and increase the results of products and services that are free from defects. Six Sigma can help to find problems, identify the causes of problems, and provide solutions to solve problems through improvement steps.

Six Sigma can help ensure better service product quality and reduce defects in the service operational process. A defect is a component outside of customer specifications for a service and results in a lack of quality in the service product produced. Using six sigma will provide proven benefits, including cost reduction, increased productivity and market share, defect reduction, and service development.

Mahar Agung Organizer was established in 2014, is one of the subsidiaries of PT Maha Perkasa Indonesia which is engaged in Event Organizer (EO) or Wedding Organizer (WO) services. Mahar Agung Organizer has a lot of experience and always competes with other Wedding Organizers in Surabaya. However, due to this competition, Mahar Agung Organizer experienced several decreases in event numbers starting in 2018 with 197 events, 2019 with 103 events, 2020 with 57 events (dr. Dwi wijayanto, 2022).

Table 1. Presentage Number of Service Users Mahar Agung Organizer

No.	Year	Number of Events	Percentage
1	2020	57	0.00%
2	2021	64	12.28%
3	2022	69	7.81%
4	2023	56	-18.84%

Source: Company Data, 2023

It can be seen in the table above, after 2020 the number of wedding events managed by Mahar Agung Organizer managed to increase by 21% until 2022. However, there was a decrease in the number of events again in the following year, namely 18.8% per month November 2023. Research from Boonlertvanich (2019) explains that the quality of service provided to customers can directly and indirectly affect consumer trust and loyalty. Therefore, the ups and downs in the number of events are indirectly influenced by customer satisfaction with the quality of services provided by Mahar Agung as an Event Organizer or Wedding Organizer. This study will discuss how to improve services that need to be done by Mahar Agung by using the Six Sigma method to measure the defect rate in every event managed by Mahar Agung for the last 3 years.

LITERATURE REVIEW

Quality is not only found in goods, but services also have quality that is assessed and meets the wants and needs of customers.

a. Quality

Wahyuni (2015) states that quality is a good or service that can fulfill customer requests and desires. A product of goods or services can be said to have quality when the value of the goods or services owned can satisfy according to the value that has been spent by the customer

b. Service Quality

(Schmuck & Benke, 2020) say that product or service quality is one of the benchmarks in increasing repurchase decisions for service products due to the positive response and satisfaction obtained by these customers. Wahyuni (2015: 7) states that there are things that need to be considered regarding service quality. First, the service product is issued by a company that is in accordance with predetermined standards. Second, customers buy from service products produced by the company based on their wants, needs and prices. The third is defective products, which are products that do not comply with the standards set by the company, and are caused by waste in the company which results in customer dissatisfaction with the product.

c. Quality Improvement Strategy

Quality improvement is a step that must be taken by the company to be able to increase the value of service products in accordance with the service standards determined by the company, through improving the efficiency and effectiveness of operational processes in services. This improvement in quality is expected to reduce the number of defects in the service process so as to increase the level of customer satisfaction and reduce costs caused by waste (Yuksel, 2012).

d. Six Sigma

Six Sigma focuses on improving operational processes or improving quality in order to produce products that meet customer needs, and has an emphasis on preventing defects. According to Evans and Lindsay (2015:199), the purpose of Six Sigma is to accelerate quality improvement and better performance than before by focusing on customer characteristics and eliminating the causes of errors or defects in the process.

e. DMAIC

In the quality improvement process using the Six Sigma method, there are 5 stages known as DMAIC (Define, Measure, Analyze, Improve and Control). DMAIC is one of the systematic Six Sigma project management models.

Define

The define stage is the first stage in the Six Sigma method, which focuses on determining the characteristics of defects that cause a product or service to not meet the expectations of the company and consumers. At this stage can also identify Critical to Quality (CTQ) in the product or service. CTQ is directly related to specific customer needs obtained through the requirements of the service output provided.

Measure

The measure stage is the second stage in quality improvement with the Six Sigma method. This stage is the implementation stage of the data that has been collected to measure the size of CTQ. To be able to find out how the company performs in producing a product, it can be calculated by determining the value of Defect per Million Opportunities (DPMO) which can then be calculated the Sigma Level value.

$$\text{DPMO} = \frac{Jumlah\ Produk\ yang\ Cacat}{(Banyak\ Produk\ yang\ Diperiksa\ x\ CTQpotensial)} \text{ x } 1.000.000$$

Analyze

This analysis stage is the stage for analyzing the factors that cause defects in a product or service which will then look for the root causes of the most defects found (Setiawan, 2020).

Improve

In the improvement stage, identification of corrective actions will be carried out which can lead to a recommendation for problem solving. This problem solving is done in order to improve the quality of a good or service.

Control

The control stage is the most important stage where repairs will be made to the process that caused the defect. At this stage, monitoring of all corrective actions will be carried out so that they remain in accordance with the specifications desired by the customer. Then the results of the repair are documented and made into standard SOPs or work guidelines that will be notified to all employees in order to prevent the occurrence of the same mistakes or waste in the operational process.

METHODOLOGY

This research on the general operational errors of Mahar Agung Organizer uses a research design with descriptive qualitative methods, which will analyze existing data in the form of numbers. These data will then be calculated and real results will be found based on the solution of the results of the problems that have been formulated.

The data used in this research is primary data obtained from interviews with Mahar Agung Organizer managers. Primary data obtained include data on the total events managed by Mahar Agung Organizer for the period 2021-2023

along with the number of defects or errors that occur in each wedding event that is run.

RESULT

Six Sigma Stages

In processing the data, 5 stages in the six sigma method are used, namely Define, Measure, Analyze, Improve, and Control.

Figure 1. DMAIC Method

1. Define Stage

This stage is the first stage in quality improvement with the Six Sigma method. At this stage, the problems that occur in the operations of Mahar Agung Organizer have been defined. This stage will be useful to identify and define the process that becomes the research criteria using the Six Sigma method.

a. Identification of Process Defect Types

The process of finding errors or defects that often occur can be found at the define stage. On the operational process of each wedding event organized by Mahar Agung, there are several characteristics of defects that cause some wedding event processes not to be as expected by the company and consumers. These errors or defects can be the cause of the event not running perfectly. Data on errors or defects that often occur in the operational process of wedding events at Mahar Agung Organizer are as follows.

Table 2. Type of Defects

Category	Defects
Event Handle	Inadequate Planning
	Lack Time of Preparation
	Mismanaging Budget
	Event didn't Run as the Rundown
	Miscalculation Guests
Vendor	Event Requirements not Fulfilled
	Loading Planning Mistake
	Vendor not on time
	Miscommunication with Vendors
	Inaccuracy of Decoration Layout
Coordination	Miscommunication with Clients
	Lack of Client Assistance
	Crew Cooperation not Optimal
	Crew made a mistake

Source: Company Data, 2023

b. Percentage of Total Defects

From the type of defects identification table above, the percentage of total defects can be calculated. The percentage of defects in each wedding event process in Mahar Agung Organizer is as follows.

Table 3. Percentage Number of Defects

No.	Type of Defects	Number of Defects	Percentage of Defects	Accumulation of Defects
1	Event didn't Run as the Rundown	165	60.22%	60.22%
2	Mismanaging Budget	18	6.57%	66.79%
3	Event Requirements not Fulfilled	18	6.57%	73.36%
4	Miscommunication with Clients	11	4.01%	77.37%
5	Crew made a mistake	11	4.01%	81.39%
6	Lack Time of Preparation	8	2.92%	84.31%
7	Loading Planning Mistake	8	2.92%	87.23%
8	Miscalculation Guests	8	2.92%	90.15%
9	Crew Cooperation not Optimal	7	2.55%	92.70%
10	Vendor not on time	5	1.82%	94.53%
11	Lack of Client Assistance	5	1.82%	96.35%
12	Miscommunication with vendors	4	1.46%	97.81%
13	Inaccuracy of Decoration Layout	4	1.46%	99.27%
14	Inadequate Planning	2	0.73%	100.00%

Source: Primary Data (Processed), 2023

At the define stage, it was found that the type of defect most often encountered in the implementation of wedding event management operations at Mahar Agung Organizer is an event that does not run according to the previously compiled rundown.

2. Measure Stage

The measure stage is the second stage in the quality improvement method with Six Sigma. At this stage, the DPMO value and the Sigma Level value are determined in the capability of the Mahar Agung Organizer wedding event management process from 2021 to 2023.

DPMO and Sigma Level values can be seen in table 4.

Table 4. DPMO and Sigma Level

	Periode	Number of Event	Number of Events Checked	Number of Defects	CTQ	DPMO	Sigma
1	2021	64	64	89	14	99330	2,785
2	2022	69	69	101	14	104554	2,756
3	2023	56	56	84	14	107142	2,742
Total		189	189	274	14	103552	2,762

$$\text{DPMO} = \frac{Number\ of\ Defects}{(Number\ of\ Events\ Checked\ x\ CTQ\ Potential)}\ x\ 1.000.000$$

$$= \frac{274}{189\ x\ 14}\ x\ 1.000.000 = 103.552$$

Sigma Level = NORMSINV((1000000-103.552)/1000000)+1.5 = 2,762

3. Analyze Stage

At this stage, the causal factors of the event didn't run as the rundown defect which has the largest number of defects are analyzed. In the following,

the cause-and-effect diagram for the largest defect type "event didn't run as the rundown" will be drawn.

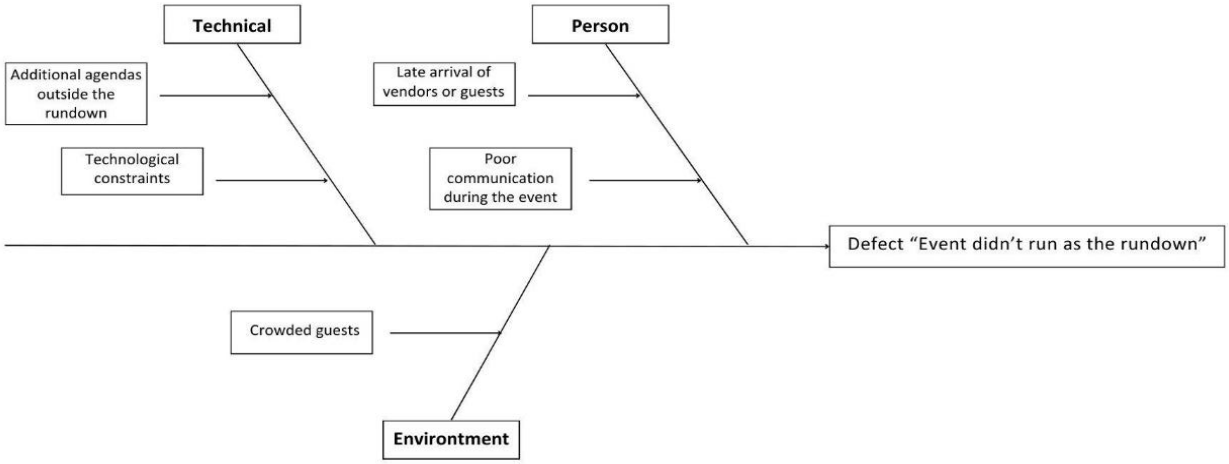

Figure 2. Diagram of Cause and Effect of Defect "Event didn't Run as the Rundown"

The cause and effect diagram explains the causes of the defect "Event didn't run as the rundown" in general with details:

1) Judging from the number of first majors that occur during weddings, there are often sudden event changes or additions to the agenda that are not in the previously compiled rundown.
2) Faults or constraints on the technology needed in the event, such as soundsystem, videotron, projector, lighting and as can be the cause of sudden changes to the rundown.
3) Delays in the arrival of vendors or guests can result in some agendas running longer, so that other agendas that have not yet occurred must be eliminated so that the event is completed as planned.
4) Poor communication between crew members and related vendors causes some agendas to not run properly.
5) Errors in communication can cause things to happen not as they should.
6) The large number of guests caused the event to run longer, because crowded guests who wanted to greet the bride and groom at the guest must be resolved before the core event to be carried out by the bride and groom.

4. Improve Stage

At this stage improvements will be given to gradually reduce the factors causing defects. Improvements that can be proposed include:

1) Increasing the intensity of communication is very important (Mangkunegara, 2011), because frequent communication will facilitate the delivery of information. The use of adequate communication channels can also help in responding to changes or problems that arise quickly.
2) Prepare a backup plan for each agenda in the event in order to immediately know the adjustment of the event with the rundown, especially if there is a very crucial agenda.

3) The company must be able to coordinate better with each vendor by following up more often and really making sure that they can come on time so that the loading time can be completed according to the specified time.
4) Controlling the invited guests who attend more efficiently so that all guests can shake hands with the bride and groom quickly and not make the time increase a little longer.
5) Provide more understanding to the bride's family regarding the event rundown, so that the implementation of the event can run better in accordance with the initial plan.
6) In every event, the project manager can carry out continuous monitoring to ensure that every element that plays a role in the event is running well as it should, so that if there is a miss it can be resolved immediately.
7) Conduct a detailed evaluation of the results of the event that has been carried out, and provide the eval to the official crew on duty so that in the future there are no similar mistakes and can run the event in accordance with the rundown that has been made.

5. Control Stage

This control stage is the last stage in improving the quality of wedding event management using Six Sigma. Of the seven suggestions for improvement that have been proposed, there are three improvements made and controlled by the company, including:

1) Provide an explanation of the possible problems that can occur at the upcoming event to the official crew and those who play a role in the implementation of the event, so that when sudden changes occur during the event each party can immediately move to implement the solutions that have been discussed previously.
2) Conduct regular follow-ups with vendors so that there are no delays, as well as controlling thoroughly every important element in the implementation of the wedding in order to know what things need to be considered so as not to cause a problem. In addition, the company can also improve communication between official crews so that coordination remains good and can overcome problems that occur during the event.
3) Give a detailed evaluation of each official crew on duty in order to reduce the occurrence of errors in subsequent events.

DISCUSSION

From the results that have been obtained using the DMAIC stages, at the define stage it is found that the type of defect that most often occurs in the operational process of wedding event management at Mahar Agung Organizer, namely the event defect did not run as the rundown because it has the largest number of defects every year.

Table 5. DPMO and Sigma Level After Improvement

	Periode	Number of Event	Number of Events Checked	Number of Defects	CTQ	DPMO	Sigma
1	23-Jun	2	2	1	14	35714	3,303
2	23-Jul	12	12	4	14	23809	3,481
3	23-Aug	3	3	1	14	23809	3,481
4	23-Sep	8	8	3	14	26785	3,43
5	23-Oct	4	4	1	14	17857	3,6
6	23-Nov	4	4	1	14	17857	3,6
Total		33	33	11	14	23809	3,481

The table above shows a DPMO value of 23,809 and a sigma level of 3.481. So it can be seen that after making improvements to the operational process of Mahar Agung Organizer's wedding event management, the sigma value has successfully increased to 3.481 where this figure shows that the operational process at Mahar Agung Organizer June-November 2023 has reached the minimum target or zero defects in Six Sigma. Six sigma can be used as a target measure for a company on how an operational process should be in accordance with customer needs (Vincent, 2020). So the higher the Six Sigma level achieved, the better the company's performance. Mahar Agung Organizer managed to improve their performance in 2023 by making several improvements, such as providing training to all official crew before the day of the wedding event, detailing the contents of the guidebook, and also improving the way of communication, both with clients and vendors. The improvements made have succeeded in reducing the level of defects that occur in every wedding event managed by Mahar Agung Organizer.

CONCLUSION AND RECOMMENDATION

Improving the quality of wedding services at Mahar Agung Organizer using the Six Sigma method found that the type of error that most often occurs in wedding event management operations is events that run not in accordance with the rundown. Before the improvement, the DPMO number was 103,552 and the sigma level was 2.762, which showed that the minimum target of Six Sigma was not achieved or in other words, the performance of Mahar Agung Organizer was not optimal in achieving the perfect Six Sigma number. The causes of defects found can be seen from technical factors such as additional agendas during the event which caused some agendas to be eliminated. In addition, the defects were caused by delays from vendors or guests, poor communication and a very large number of guests. From the causes of these defects, several improvements were made, including training for the official crew, detailing the guidebook, and improving how to communicate with vendors and clients. From the results of these improvements, an increase in the sigma number of 0.719 was obtained so that Mahar Agung Organizer managed to achieve the minimum Six Sigma target of zero defects.

SUGGESTION

The suggestion that can be given to Mahar Agung Organizer is to make continuous improvements in the operational process of organizing events. Improvements can be started from improving internal communication, both between employees, clients, and all external parties involved. There is a detailed evaluation after the event to find out what mistakes were made so that it will produce recommendations for improvement to improve the quality of service at Mahar Agung Organizer in the future.

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