

# Analysis of Major Performance Assessment on Representative Management using Integration Performance Measurement Methods

Annisa Wulandari<sup>1</sup>, Versi Hangga Riksa<sup>2</sup>, Marinus Halawa<sup>3</sup>, Zulfa Fitri Ikatrianasari<sup>4</sup>  
<sup>1,2,3,4</sup>Industrial Engineering, Mercu Buana University, Jakarta, Indonesia

**Abstract:** As an integral part of the Company's Management Representative Division, performance measurement measures that have been implemented in the Management Representative are still in the technical aspects of the ISO requirement. In line with the scope audited by outsiders. Therefore, performance measurement designs are carried out that can demonstrate the overall performance of the Management Representative Division within the company. This measurement design is intended to complement the measurement of existing KPI performance. The integrated performance measurement system (IPMS) method is used to formulate the introduction of key performance indicators (KPIs) based on the needs of stakeholders within it (stakeholders). Based on the research done, the result of the total employment index is 8.3 which means that the performance of the Management Representative Division has generally achieved the expected performance.

**Keywords:** Management Representative, Key Performance Indicator, IPMS

## 1. Introduction

The rapidly expanding developments in the world, especially in the industrial sector, demand increasing competition. Management plays a very important role in its position, as well as production management, marketing, and especially human resources as it is a key factor in corporate or production organization. The needs of human resources are tailored to the form and purpose of the company made on the basis of vision and mission for the benefit of human beings and in its implementation are managed and managed by human beings. In the maintenance of human resources, the things to be learned are employee job satisfaction, conflict management, employee motivation, and communication that takes place in the Representative's management organization. The Management Representative is required to have and implement a quality management system (QMS) in accordance with ISO 9001 which has been established by top management. With SMM as the main actor, the organization will gain a credible HR. According to ISO, SMM is defined as a system for determining policies, targets, and achieving direct and regulatory goals in organizations that affect quality. According to this standard, the core quality management system includes:

- There is a quality policy, quality planning, quality objectives, work procedures, work instructions, and quality records.
- There is a guarantee that quality management standards are conducted, monitored, evaluated and corrected.
- There is a guarantee that there will be continuous quality improvement in the process of service and production processes, and in its own quality management standard.

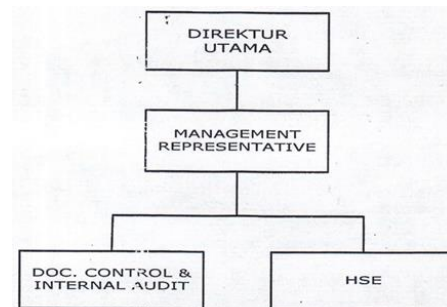


Fig. 1. Organizational structure Divisi Management Representative

The companies involved in the manufacture of transformers are constantly working to improve customer satisfaction. Employees are required to work optimally in meeting the needs of consumers, especially customer service or sales department as the company's main entry point where customer service division is an intermediary between customer and company. This section meets directly with customers in providing information and receiving customer complaints. Therefore, as a long-term investment in performance from employees, performance research is needed that benefits both companies and employees to improve quality. The existence of job evaluations consistent with descriptions and position responsibilities will enable the company to rewards in the form of salaries, bonuses, and even promotions in real terms. Cascio (2006) says that work assessments have several benefits, including the implementation of reward and punishment systems, providing feedback to employees, for future career

development, identifying development training needs for employees, and diagnosing problems in the organization. Performance assessment results can indicate whether human resources have met the demands of the company, both in terms of quality and quantity. There are several factors that influence the performance appraisal process, namely:

- Reliability, that is, rating factor must be reliable. Achievement measures must be consistent, where two evaluators will evaluate their performance and conclude similar things about the quality of workers.
- Relevant, which is the alignment between scoring and scoring system goals, performance measures must be linked to the actual output of the activity that may be logically possible.
- Sensitivity, which is a particular measure must be able to reflect the difference between high and low level of appearance. Appearance must be able to differentiate carefully about the difference in performance.
- Practical, easy-to-understand and practically usable and data deficient is not too disturbing.

Activity-measuring activity is a step that must be done after completing the design of performance measurement systems. The level of performance measurement system design is a stage form that determines the merits of performance measurement. In general, the measurement of work is divided into five stages, namely planning, measuring, evaluating measurement results, planning, and re-evaluating performance measurement systems (Vanany, 2009). This cycle is a continuous cycle.

## 2. Research methodology

### A. Research methodology

The planning process starts with determining the chosen model, including the framework, to define Key Performance Indicators (KPIs). Measuring organizational performance is based on the relevant KPIs and the design results of the performance measurement system. Performance assessments are carried out to measure whether performance improvements or not. Sinclair and Zairi (1995) in Vanany (2009) identify several reasons why the organization needs a performance measurement system from some system experts who measure their performance, including:

- Plan, control and evaluate
- Controlling changes,
- Communication,
- Measurements and repairs,
- Measurement and motivation,
- Allocation of resources,
- Focus on the long-term.

The Matrix Objective (OMAX) is a partial productivity measurement system developed to monitor productivity in every part of the company with productivity criteria consistent with the existence of these objectives. This model was developed by Dr. James L. Riggs (Department of Industrial

Engineering at Oregon State University). OMAX was introduced in the 80s in the United States. This measurement model has unique features, which are working group performance criteria combined into matrices. Each performance criterion has a target in the form of a special repair menu and weighs in line with the importance of productivity goals. The end result of this measurement is a value for the working group. At OMAX, it is expected that all activities of the company will evaluate, improve, and maintain unit performance, as this system is a measurement system delivered directly to various units / units.

This research aims to provide performance measurement designs for the Management Representative Division which is a descriptive study, which explains objective objectively, relatively and is assessed as a decision-making tool for the authorities. Research level is:

- *Field Study*: The first step that needs to be done is to conduct a direct observation at the Management Representative Division to get an overview of the actual situation of the object to be studied.
- *Literary Studies*: Literature studies are conducted to obtain information and support the theories required such as the theory of Integrated Performance Measurement System, OMAX, and others.
- *Identification of the Problem*: The problem identification was made to identify the problems that occurred in the Management Representative Division.
- *Formulation of Problem*: After identifying the problem, the next step is to formulate the problematic problem and to illustrate the objective of the problem raised.
- *Determination of Research Objectives*: The purpose of this study was determined based on the problem statement described earlier. It aims to determine the required limits in processing and subsequent data analysis.
- *Identification of company level*: At this stage the introduction of the company level includes the parent business, business units, business processes and activities within the company from the Management Representative Division in line with the IPMS framework.
- *Identification of stakeholder's needs*: Prior to identifying the needs of stakeholders, the first division is divided into organizations into four levels of business in accordance with the framework of IPMS and corporate system approach, namely the parent business, business units, business processes and in-company activities. At this stage, it is conducted through good discussions with the efficient management of the Management Representative Division of the Company.
- *Creating a company goal*: Once the interests of the parties are determined, then the purpose is set. The



Table 2  
 KPI's target and target services, environment, work safety and 5 R

NO	SASARAN	TARGET KPI	BOBOT	REALISASI																								AKK								
				1		2		3		T1		4		5		6		T2		7		8		9		T3			10		11		12		T4	
				Actual	Score	Actual	Score	Actual	Score	Actual	Score	Actual	Score	Actual	Score	Actual	Score	Actual	Score	Actual	Score	Actual	Score	Actual	Score	Actual	Score		Actual	Score	Actual	Score	Actual	Score	Actual	Score
<b>3. SASARAN PELAYANAN</b>																																				
3.1.	Kesalahan perencanaan jadwal audit internal dengan realisasi	Max. 3 kali tidak sesuai dengan jadwal /bulan	2,5%	0	2,5	0	2,5	1	2,1	2,4	0	2,5	1	2,13	1	2,13	2,3																			
3.2.	Pemenuhan kebutuhan dokumen eksternal permintaan pelanggan	100%	5%	100%	5,0	100%	5,0	100%	5,0	5,0	100%	5,0	100%	5,0	100%	5,0	5,0																			
3.3.	Kesalahan perencanaan jadwal patrol K3 dan Lingkungan	Max. 3 kali tidak sesuai dengan jadwal /bulan	2,5%	1	2,13	1	2,13	2	1,75	2,00	1	2,13	2	1,75	2	1,75	1,88																			
3.4.	Pelaporan neraca limbah ke instansi terkait	1 kali /1 bulan	5%	1	5,0	1	5,0	1	5,0	5,0	1	5,0	1	5,0	1	5,0	5,0																			
3.5.	Laporan Bulanan	Max Tanggal 3 bulan berikutnya	5%	1	5,0	1	5,0	1	5,0	5,0	0	5,0	0	5,0	0	5,0	5,0																			
Total			20,0%		19,6		19,6		18,9				19,6		18,9		18,9																			
<b>4. SASARAN LINGKUNGAN</b>																																				
4.1.	Penaatan Terhadap Perundang-Undangan dan Peraturan Lain (Lingkungan)	100%	2,5%	100%	2,5	100%	2,5	100%	2,5	5,0	100%	2,5	100%	2,5	100%	2,5	5,0																			
Total			2,5%		2,5		2,5		2,5				2,5		2,5		2,5																			
<b>5. SASARAN KESELAMATAN KERJA</b>																																				
5.1.	Penaatan Terhadap Perundang-Undangan dan Peraturan Lain (K3)	100%	2,5%	100%	2,5	100%	2,5	100%	2,5	2,5	100%	2,5	100%	2,5	100%	2,5	2,5																			
5.2.	Jam Tanpa Kecelakaan Kerja	0 Jam	2,5%	0	2,5	0	2,5	0	2,5	2,50	0	2,5	0	2,5	0	2,5	2,50																			
5.3.	Persentase Jumlah Sakit	0,3%	2,5%	0%	2,5	0%	2,5	0%	2,5	2,50	0%	2,5	0%	2,5	0%	2,5	2,50																			
Total			7,5%		7,5		7,5		7,5				7,5		7,5		7,5																			
<b>6. 5R (Ringkas, Rapi, Resik, Rawat, Rajin)</b>																																				
Total			2,5%		2,5		2,5		2,5				2,5		2,5		2,5																			

Table 3  
 Target and Target KPI efficiencies

NO	SASARAN	TARGET KPI	BOBOT	REALISASI																								AKK								
				1		2		3		T1		4		5		6		T2		7		8		9		T3			10		11		12		T4	
				Actual	Score	Actual	Score	Actual	Score	Actual	Score	Actual	Score	Actual	Score	Actual	Score	Actual	Score	Actual	Score	Actual	Score	Actual	Score	Actual	Score		Actual	Score	Actual	Score	Actual	Score	Actual	Score
<b>7. KOMPETENSI</b>																																				
7.1.	Motivasi Kerja (Self Motivated)	Baik	2,5%	89	2,23	89	2,23	89	2,23	2,23	89	2,23	89	2,23	89	2,23	2,23																			
7.2.	Berwawasan Organisasi (Human Relationship)	Baik	2,5%	87	2,23	87	2,23	87	2,23	2,23	87	2,23	87	2,23	87	2,23	2,23																			
7.3.	Kepeimpinan	Baik	2,5%	85	2,23	85	2,23	85	2,23	2,23	85	2,23	85	2,23	85	2,23	2,23																			
7.4.	Profesional	Baik	2,5%	85	2,23	85	2,23	85	2,23	2,23	85	2,23	85	2,23	85	2,23	2,23																			
7.5.	Jujur	Baik	2,5%	89	2,23	89	2,23	89	2,23	2,23	89	2,23	89	2,23	89	2,23	2,23																			
7.6.	Inovatif	Baik	2,5%	89	2,23	89	2,23	89	2,23	2,23	89	2,23	89	2,23	89	2,23	2,23																			
7.7.	Membimbing & Memotivasi	Baik	2,5%	88	2,23	88	2,23	88	2,23	2,23	88	2,23	88	2,23	88	2,23	2,23																			
7.8.	Mampu Berkomunikasi dengan Atasan/Rekan/Bawahan	Baik	2,5%	85	2,23	85	2,23	85	2,23	2,23	85	2,23	85	2,23	85	2,23	2,23																			
Total			20%		17,8		17,8		17,8		17,8		17,8		17,8		17,8																			
TOTAL NILAI KPI			100%		93,5		93,5		95,7		41,4		96,2		95,5		95,0																			

of the triumphal tour, it requires product safety and production relief areas from the HSE Department. And from the side of the document, starting from the company's policy, product quality objectives, procedures, product designs, reports, and so forth are provided in the Document Control & Internal Audit Section.

**D. Worker**

The Management Representative Division has two sections below HSE, DC & IA as the implementing member in controlling the K3 & L system and ISO product quality management system in the company's business unit.

**E. Community**

Communities are parties directly or indirectly connected to Management Representatives, namely communities around the

Company's environment, students and working students practice or research in the Management Representative Division.

**F. Supplier**

Supplier from the Company is the person sending the goods / materials transformers that have been ordered to be used later in the transformer production process. Suppliers are subject to ratings related to product safety, product quality, and production system & production capacity that MR team can meet, along with Quality Assurance, Procurement. Scaling is not only on KPI targets. However, weight is also carried out for stakeholders and objectives. Processing data using the Preferred Expert software. The weight gained must be consistent with the condition of the inconsistent ratio must be less than or equal to



Table 4  
 Value of KPI's KPRI

Kode KPI	Bobot	Kode KPI	Bobot	Kode KPI	Bobot	Kode KPI	Bobot	Kode KPI	Bobot
M1	0,030	C1	0,036	Em1	0,004	Cm1	0,015	Em1	0,001
M2	0,040	C2	0,034	Em2	0,001	Cm2	0,025	Em2	0,006
M3	0,050	C3	0,017	Em3	0,008	Cm3	0,023	Em3	0,002
M4	0,070	C4	0,005	Em4	0,001	Cm4	0,026	Em4	0,055
M5	0,140	C5	0,035	Em5	0,002			Em5	0,008
M6	0,030	C6	0,055	Em6	0,001			Em6	0,030
M7	0,080	C7	0,027	Em7	0,002			Em7	0,007
M8	0,010	C8	0,030	Em8	0,004			Em8	0,012
M9	0,004	C9	0,016	Em9	0,004				
M10	0,004	C10	0,040	Em10	0,003				
M11	0,001	C11	0,012	Em11	0,012				
M12	0,007	C12	0,025	Em12	0,005				
M13	0,004			Em13	0,003				
0,424		0,219		0,023		0,074		0,120	
<b>Total Bobot Seluruh KPI</b>									<b>1</b>

0.1. If the weight was inconsistent, the management confirmed it. The weighting value will be used in calculating the scoring system. To get the total value of KPI's weight from stakeholders in the Management's Representative Division, it is performed by:

$KPI = \text{Weight of Stock} \times \text{Weight of Heavy Object} \times \text{Weight of KPI}$ . The overall weight of the KPI can be seen in Table 4.

**G. Score system with OMAX and light traffic**

First, the value will be set at levels 10, 3, and 0. Level 10 contains a target Management Representative in 2018. Level 8 is the value at which the KPI is said to be safe. Level 3 is filled with minimum KPI limits that must be fixed. Level 0 filled with the lowest reserves achieved by the Management Representative. In OMAX tables besides levels, there are also values and weights. Weight value is the total weight value of the KPI as shown in Table 1. The value of the value is the multiplication between the stages and the weight. Then all value values will be summed up to find out the value of the overall performance index. Overall score for KPRI UB can be seen in Appendix 1. By using OMAX the overall value of the Management Representative index is 8.3. Based on the Traffic Light System, then the value is included in the green category indicating that the performance of the Management Representative generally achieves the expected performance target. Among the five stakeholders, there are four stakeholders who are classified as green, i.e. stakeholder marketing with score 9, employees with a score of 10, a stakeholder community with a score of 10, and a stakeholder provider with a score of 10. The only stakeholders that classified as yellow is a stakeholder customer with a score of 6, 1. Description of performance achievement performance from the above 50 KPIs are as follows:

- Identify 39 KPIs belonging to the green category, indicating that performance indicators have been achieved.

- Identify 5 yellow category KPIs, indicating that performance indicators are not achieved so management needs to be cautious with various possibilities.
- Identify 6 KPIs that fall into the red category which means that the performance indicators are really below the target set and require immediate improvement. Most KPIs that need and need to be repaired are the property of the customer, then to marketing, so it can be said that the goals of both stakeholders have not been reached. Therefore, the need for both stakeholders has not been met. While the needs for workers, communities, and stakeholders' needs are met.

**H. Category yellow KPI**

KPIs in the yellow category can be seen in the following:

- KPI M1: Request level of documents:** For KPIs, the level of request for documents is one of the two KPIs in the yellow category, where the documentation is material. This KPI is used to measure the level of compliance of the company's ISO requirements. The indicator's target is 0.015, while the realization at 2018 is 0.013. If calculated using the Object Matrix (OMAX) method, the KPI is at level 7. A high level of request for documents is obtained when the ratio of demand for tender documents increases according to orders obtained by marketing. Proposed improvements to improve the acquisition of the tender project are to make efforts to improve the quality of transformer products, product variations, new product innovations as requested by customers, including increasing customer KPIs that are still not green.
- M3 KPI: Profit Margin (PM):** KPI Profit Margin (PM) is one of two KPIs in the yellow category, where the material is in accounting. This KPI is used to measure

the level of achievement of the company's profit margins. The indicator's target is 0.015, while the realization at 2018 is 0.013. If calculated using Objective Matrix (OMAX) method, the KPI is at level 7. High profit margin (PM) is obtained when the profit after tax ratio is greater than net sales. Suggestions for improvements to improve Profit Margin (PM) achievement by enhancing target Management Representatives to achieve greater effectiveness.

- *KPI M10*: Total attendance of the Coordination Meeting the Division at Management Representative Division with weekly seminars, monthly and semester (6 Months) KPI achievement plans is used to measure how many members of the Management Representative Division are active contributions in the ISO system operating system. The target of this indicator is 100%, while realization in 2018 is 70%. When calculated using the Matrix Objectives (OMAX), the KPI is at level 7.8. In fact, the level of participation of staff / staff in attending meetings is good. if the parties have no specific reason for absence, they must inform or provide target data for the next day.
- *KPI C2*: The value of the service process: In this KPI, it aims to measure the extent of the service process taking place at the Management Representative Division. The target of this indicator is 100, whereas the realization in 2018 is 72. If calculated using Objective Matrix (OMAX) method, the KPI is at level 3. The proposed improvement for KPIs is to provide an understanding of the importance of segregating important activities from routine through priority scales, as some of the opportunities that are present in certain parts of the activities are not optimal. In addition, computer-assisted devices are often suspended or non-responsive, errors when binding documents, input data, reporting, provisioning, sending external documents (e-mails). So it becomes the point that needs to be improved by the management of the Management Representative Division. The point is one of the reasons for not reaching the target value in the service process.
- *KPI C9*: Customer complaints: Customer complaints about KPIs are used to measure the frequency of stakeholder complaints on variations in meeting achievements in Represents Management in relation to company documentation and security. The target of this indicator is 0, while the realization in 2018 is 7. If calculated using the Matrix Objectives (OMAX) methodology, this KPI is at step 6. Suggestion improvements for this KPI is to supplement the fulfillment of goods according to the routine requested by the stakeholders.

#### 1. *KPIs in the red category*

KPIs in the red category can be seen in the following points:

- *KPI M11*: Percentage of active members in weekly meetings and annual KPI annual meeting members is used to measure how many members of the Management Representative Division are active in operating activities. The target of this indicator is 100%, while realization in 2018 is only 4%. If calculated using the Object Matrix (OMAX) method, the KPI is at 0.6 or in other words still far from the target. Due to various limitations, not all members attending weekly / monthly Coordination Meetings and Annual Meetings have the opportunity to present their targets for achievement at meetings. Therefore, suggestions for improvements are needed so that each member can get a chance, either a brief presentation or data sharing about the achievement of the work.
- *KPI C1*: Compliance with the KPI provisions is used to measure the level of compliance and compliance with laws and regulations by members of the Management Representative in controlling the regulatory system within the company. The target of this indicator is 100, while the realization in 2018 is 70. If calculated using the Matrix Objectives (OMAX) methodology, this KPI is at level 3. Suggestion for improvement to improve understanding and compliance at all levels in the company by providing internal training, refreshing work in the company to employees to establish an understanding of what needs to be done to achieve compliance.
- *CPI C3: Internal measurement*: This KPI is used to measure the comfort level of the work area. The target of this indicator is 100, whereas the realization in 2018 is 0. If calculated using Objective Matrix (OMAX) method, the KPI is at level 2.4. Suggestions for improvements to improve the value of workplace comfort include routine measurement of lighting conditions, workplace noise to adjust the threshold value (NAB).
- *CPI C4: Percentage of opinions & suggestions*: Customers who have been realized in KPI are used to measure the percentage of customer opinions & suggestions that have been realized. The target of this indicator is 100%, while realization in 2018 is 40%. If calculated using the Object Matrix (OMAX) method, the KPI is at 3.5. The proposed improvement to improve KPI's achievement is that the management must strive to realize the customer's opinions or suggestions.
- *KPI C6: Error scheduling audit*: This KPI is used to measure the accuracy of the audit scheduling with the realization of the implementation implemented by the Management Representative. The target of this indicator is 100, while the realization in 2018 is 42.86.

Table 5  
 Score total KPI stakeholder

Stakeholder	Objectives	Nilai OMAX Objectives	KPI	Nilai OMAX KPI	Score total	
1 Marketing	1	0,08	7,4	M1	1	7,4
	2	0,1	10	M2	1	10
	3	0,16	7,3	M3	0,75	7
				M4	0,25	8
	4	0,41	9,15	M5	0,83	9,3
				M6	0,17	8,2
	5	0,21	10	M7	1	10
				M8	0,04	8
	6	0,6	8,8	M9	0,16	10
				M10	0,20	7,8
				M11	0,07	0,6
		M12	0,33	10		
		M13	0,20	10		
<b>Score Marketing</b>			9			
2 Customer	1	0,27	2,4	C1	0,39	1,7
				C2	0,40	3
				C3	0,18	2,4
	2	0,6	6	C4	0,06	3,5
				C5	0,17	9,4
	3	0,18	10	C6	0,27	1,2
				C7	0,13	10
				C8	0,15	1,2
		C9	0,08	6		
		C10	0,20	10		
		C11	0,33	10		
		C12	0,67	10		
<b>Score Customer</b>			6,1			
3 Employee	1	0,31	10	Em1	0,30	10
				Em2	0,11	10
				Em3	0,70	10
				Em4	0,11	10
	2	0,49	10	Em5	0,15	10
				Em6	0,09	10
				Em7	0,14	10
				Em8	0,03	10
				Em9	0,20	10
	3	0,13	10	Em10	0,13	10
				Em11	0,66	10
	4	0,08	10	Em12	1	10
				Em13	1	10
<b>Score Employee</b>			10			
4 Community	1	0,16	10	Cm1	1	10
				Cm2	0,50	10
	2	0,5	10	Cm3	0,50	10
				Cm4	1	10
<b>Score Community</b>			10			
5 Supplier	1	0,09	10	Em1	0,09	10
				Em2	0,63	10
				Em3	0,28	10
				Em4	0,88	10
	2	0,51	10	Em5	0,13	10
				Em6	1	10
	3	0,24	10	Em7	0,33	10
				Em8	0,67	10
<b>Score Supplier</b>			10			

If calculated using the Object Matrix (OMAX) method, the KPI is at level 1.8. Suggestions for improvements to make short-term audit timetables, coordinating schedules and communication links with the authorities in an intensive manner.

- *KPI C8*: The frequency of customer: complaints on the

product of the transformer whose damage frequency is higher than that of KPI competitors is used to measure the frequency of consumer complaints about reliability and product quality. The indicator's target is 0, while the realization in 2018 is equal to 12. If calculated using Objective Matrix (OMAX) method, the *KPI is*

at 1.2: The proposed improvement to improve KPI's achievement is to formulate an accurate quality strategy. The Management Representative must analyze the various product quality factors and provide input on production processes, materials, product testing etc. And look at what focus will be "raised" as input to top management. In order for complaints related to product accessories to lower and capture opportunities for improvements to be applied to other typed products.

### 3. Conclusion

The conclusions from this study, based on the problem statement are as follows:

- Results of performance measurement that integrates all stakeholders in the Management Representative Division using the Integrated Performance Measurement System method of 50 KPI which consists of 13 Marketing KPIs, 12 KPI customers, 13 KPIs, 4 KPIs and 8 KPI providers. Using Object Matrix (OMAX) and Traffic Light System produced 39 KPIs are green category, 5 KPIs are classified as yellow, and 6 KPIs are classified as red.
- Most KPIs need and should be improved is the KPI to customer and marketing stakeholders, so that the objectives of both stakeholders cannot be achieved. Requirements for client and investor stakeholders have not been met. While the needs for workers, communities, and stakeholders' needs are met. From the overall result of KPI processing, the overall value of the work index is 8.3, which means that the overall performance of the Management Representative can be said to have achieved the expected performance because in the green category. Among the five stakeholders, there are four stakeholders who are classified as green, ie investment stakeholders with a score of 8.9, employees with a score of 10, a stakeholder community with a score of 10, and a stakeholder provider with a score of 10. The sole stakeholder classified as yellow is a stakeholder customer with a score of 6, 1.

A. *Suggestions for improvements that may be awarded to five KPIs classified as yellow is*

- Increase product sales & marketing revenue, such as increased marketing KPIs that are still not green.
- Make efforts to improve quality & reliability so that the achievement of the goal of greater customer fulfillment.
- Add different types of products, accessories according to what the customer recommends.

B. *The proposal for improvements that may be awarded to six KPIs classified as red are*

- Provide internal training to employees and production offices related to quality management system (ISO 9001: 2015) to create understanding, awareness and concern about the quality of transformer products sold.
- Maintaining a quality management system that has been implemented within the company, conducts internal audits to ensure that each department is consistent in implementing ISO requirements.
- Superior management should be encouraged to realize a good quality system policy to be implemented internally (marketing, employees / employees), outsiders (customers, communities, suppliers) and relevant stakeholders.

### References

- [1] Budiarti, Isniar; 2004. Balanced scorecard Sebagai Alat Budiarti, Isniar; 2004. Balanced scorecard Sebagai Alat Ukur Kinerja Dan Alat Pengendali Sistem Manajemen Strategis. Majalah Ilmiah Unikom 6: 51-59
- [2] Soemantri, A., (2006): Aplikasi Statistika Dalam Penelitian, Pustaka Setia, Bandung.
- [3] Luis, S. dan P. A. Biromo. 2007. Step by Step in Cascading Balanced Scorecard to Functional Scorecards. PT Gramedia Pustaka Utama, Jakarta.
- [4] Suwignjo P, Baticti US, Carrie AS., 2000. Quantitative Models for Performance Measurement Systems. International Journal of Production Economics, (644), p.231-241
- [5] Suartika I. M., Suwignjo P., Syairuddin B., 2007. Perancangan dan Sistem Implementasi Pengukuran Kinerja dengan Metode Integrated Performance Measurement Systems. Jurnal Teknik Industri, Vol. 9 (2), p.131-143.