

PROPOSED DESIGN OF PERFORMANCE MANAGEMENT SYSTEM USING MODIFIED KNOWLEDGE-BASED PERFORMANCE MANAGEMENT SYSTEM FOR ENTERPRISE BUSINESS OF PT. XYZ

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Abstract

PT. XYZ is a State-Owned Enterprise (SOE) engaged in the field of information and communication as well as a service provider and telecommunications network that serves B2B in its enterprise business. With the currently increasing market competition for ICT products and services for businesses, enterprise business is expected to improve performance to win the market competition. Performance Management System (PMS) design and implementation are critical elements of management control systems for providing the best solutions for businesses. This paper proposes a modified Knowledge-Based Performance Management System (KBPMS) framework for enterprise business. The framework design is using three perspectives, which are organizational results, internal process, and resource capabilities. The paper has shown there are a total of 18 performance indicators. The variable linkage is carried out using correlation analysis of past performance indicators for determining the relationship between indicators. The performance variable weighting uses the scoring reference from seven perspectives used for the *Kriteria Penilaian Kinerja Unggul* (KPKU) or Excellence Performance Assessment Criteria created by the Ministry of SOE for SOEs in Indonesia which based on Malcolm Baldrige National Quality Award (MBNQA). Therefore, the modification of KBPMS design with KPKU-based scoring provides an excellent performance depiction for business enterprises in SOE.

Keywords: Kriteria Penilaian Kinerja Unggul, Knowledge-Based Performance Management System, Malcolm Baldrige National Quality Award, Performance Measurement System.

1. Introduction

According to BPS (2022), one of the industries that are emerging rapidly in the middle of the COVID-19 pandemic is information, communication, and technology (ICT). the ICT sector increased by 1.16% in 2020, rising from 9.42% (YoY) in 2019 to 10.58% (YoY). This is a result of the government's policy for work from home to reduce the spread of COVID-19. Because of that, the demand for products and services based on ICT is rising. The increasing demand for ICT products and services occurred in the Enterprise Business of PT. XYZ. This is proven by the revenue for the Enterprise Business increased by 14.4% in 2021.

PT. XYZ comes with various solutions to support business development by utilizing technological developments. In providing the best solutions for business, the Enterprise Business must be able to show high performance. Corporate performance is not only seen from one perspective such as financial but from various perspectives. To measure corporate performance comprehensively, a good performance management system design is needed that supports the achievement of goals.

A Performance Management System (PMS) monitors individual and team performance in a consistent and measurable manner. The system ensures that individuals and teams across the organization are linked with and contribute to the business's strategic goals (SAP, 2022). The need for a new PMS cannot be separated from several situations and conditions such as the changing business competition environment, government regulations, the necessary controls on various human behavior, and the need to review strategic management to improve the

company's competitiveness (Wibisono, 2016). Therefore, any change in the business may need a new performance management system that is suitable for the change.

A knowledge-Based Performance Management System (KBPMS) was introduced by Wibisono (2016) because there was no guide that explains the methodology for designing a PMS that should be carried out in accordance with the context in which the company is managed. The KBPMS is used to ensure that the system is valid, relevant, and practicable for execution. The system application is built not just on theoretical foundations, but also on feedback from professionals in Indonesia.

The performance management system used by Enterprise Business PT. XYZ is divided into two aspects, which are financial and non-financial, and is divided based on the scope of measurement whether it's divisional or directorate. To improve the performance management system to be ideal, the Enterprise Business requires redesigning the PMS. With KBPMS, the design measures three perspectives and nine aspects so that the performance measurement will be comprehensive. In addition to the Ministry of SOEs using the Malcolm Baldrige National Quality Award (MBNQA) in assessing the performance of SOEs in Indonesia, the performance variables will adjust to the scoring of the *Kriteria Penilaian Kinerja Unggul* (KPKU) or Excellence Performance Assessment Criteria.

2. Research Problem

The Enterprise Business of PT. XYZ needs to improve the design of its performance management system because the previous system was limited to measuring only financial and non-financial aspects. With the growing development of Enterprise Business, a new PMS is needed that is comprehensive, can be linked to all business stakeholders, and contributes to the business's strategic goals. The objectives of this research are to design a PMS using a modified Knowledge-Based Performance Management System (KBPMS) for the Enterprise Business of PT. XYZ, to determine the appropriate weight for performance indicators, and to provide the recommendations and the implementation plan of the proposed performance management system design.

3. Literature Review

Performance Management System

According to Aguinis (2013), performance management is a continuous process of identifying, measuring, and developing the performance of individuals and teams and aligning performance with the strategic goals of the organization. This means that performance management supports by ensuring the organization's success.

In designing performance management designs, there are various methods that can be used. The performance management systems available are Malcolm Baldrige National Quality Award (MBNQA), Strategic Measurement Analysis and Reporting Technique (SMART), Performance Measurement Questionnaire (PMQ), Performance for World Class Manufacturing (PWCM), Quantum Performance Measurement Model (QPMM), Balanced Scorecard (BSC), Performance Prism, and Knowledge-Based Performance Management System (KBPMS).

Knowledge-Based Performance Management System

Based on research by Wibisono (2003), there are shortcomings in conventional Performance Management Systems (PMS). *First*, PMS is less relevant especially if conventional performance measurement variables are based on accounting systems and are applied at the operations management level because of the measures that are not commonly used in daily practice. *Second*, it tends to report past performance because the financial report is reporting the

performance achieved by the company at the end of the year. *Third*, financial orientation tends to be short-term. Since companies now shift to focus to grow, develop, and sustaining. *Fourth*, it is designed based on standardized and fixed variable measurements which are contrary to the dynamic competitive environment. *Fifth*, the absence of good benchmarking in the internal improvement or external comparison results in conventional PMS that doesn't foster improvement. *Sixth*, conventional PMS tends to measure all the aspects based on cost calculation. Therefore, it results in cost distortion.

A knowledge-Based Performance Management System (KBPMS) was introduced by Wibisono (2016) because there was no guide that explains the methodology for designing a PMS that should be carried out in accordance with the context in which the company is managed.

The Knowledge-Based method is chosen for the reasons listed below. First off, a good PMS implementation typically involves a significant number of performance variables, many of which have complex interactions. Second, supporting tools are required for the priorities for improving performance factors in order to maintain the accuracy and consistency of decision-making. Thirdly, the benchmarking procedure must be supported by the proper tools in order to determine a company's competitiveness. Due to these factors, choosing the right method and putting it into practice can be difficult for business professionals.

Malcolm Baldrige National Quality Award

Malcolm Baldrige National Quality Award (MBNQA) is a formal quality management system applicable in the United States. The Malcolm Baldrige National Quality Improvement Act of 1987 was created by the US Congress and passed by President Ronald Reagan into Public Law 100-107. The MBNQA was developed to find businesses that could serve as role models, set criteria for assessing improvement efforts and communicate best practices (Gaspersz & Fontana, 2011).

Performance excellence is an integrated strategy for managing organizational performance that leads to providing stakeholders and customers with value that is constantly improving and strengthening the organization across the board, improvement of organizational capabilities and overall effectiveness, and personal and knowledge management

The Malcolm Baldrige Criteria for Performance Excellence (MBCfPE) can identify strengths and opportunities for improvement (OFI) from various areas within the organization.

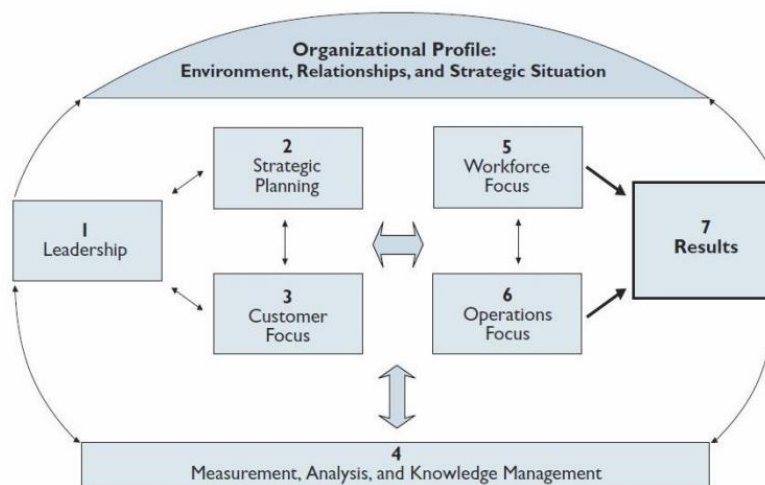


Figure 1: MBCfPE Framework

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In MBNQA, 45% of the criteria are focused on the results achieved, while 55% of the criteria relate to how an organization should be operated. Criteria 1-6, with a total of 550 points, concentrate on the methods or procedures used by organizations. Criterion 7 is responsible for the remaining 45% of the points.

Kriteria Penilaian Kinerja Unggul

Kriteria Penilaian Kinerja Unggul or KPKU framework helps identify and capitalize on strengths and deal with work challenges. KPKU helps address issues that are important to organizations as follows: Understanding what it takes to be competitive and achieve long-term success in a corporate environment; Keeping all leaders, managers, and employees on the same orientation; Ensuring that employees understand and can contribute and drive organizational success; Understand and meet customer requirements and expectations; Ensuring that the organization's operations are efficient and lead to short-term and long-term success. So that leaders are better able to position the organization to succeed and complete the company's mission more clearly and broadly, with integration between leaders and employees.

KPKU adapts the MBNQA framework contained in the MBNQA. So that the KPKU framework also has 7 categories. What distinguishes MBNQA from KPKU are the sub-categories and scores assigned to these sub-categories.

KPKU is an assessment criterion made by the Ministry of SOE to be applied by all SOEs in Indonesia. The KPKU framework plays three roles in strengthening the competitiveness of SOEs: Helping improve organizational processes, capabilities, and results; Facilitating communication and sharing of best practices among SOEs through the BUMN Performance Excellence Award (BPEA); Serves as a work tool for understanding and managing organizational performance, guides strategic thinking, and provides opportunities for learning.

4. Methodology

Conceptual Framework

In order to create a new PMS business enterprise for SOE, this research used literature reviews. The KBPMS and MBNQA were two of the frameworks whose attributes were discussed in the literature review. Then, a framework was created from the performance characteristics attributes of the KBPMS and MBNQA that applied to the context of business enterprises. In this case, it is expected that the combination of KBPMS and MBNQA will provide a framework for managing the performance of the enterprise business in SOE that is more comprehensive and relevant. The synthesis between the performance measurement design of KBPMS and MBNQA scoring is depicted in Figure 2.

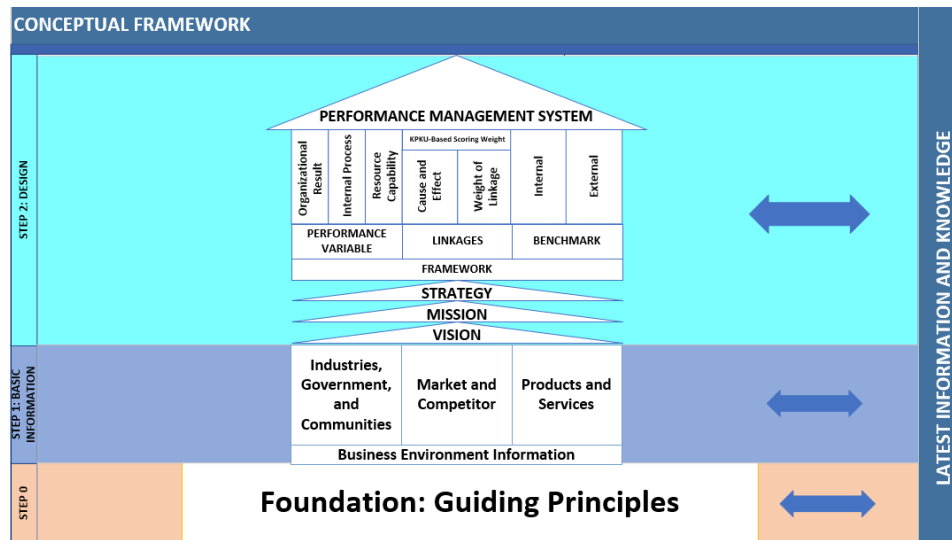


Figure 2: Conceptual Framework

From the framework above, there are three steps in formulating a Modified KBPMS. The steps explain all information that may be utilized to develop a new performance management system.

Case Study

The majority of the data was gathered from historical data. The appropriate performance variables are selected using a total of three historical Key Performance Indicators for the years 2019 through 2021. There are nine aspects divided across three perspectives: organizational result, internal processes, and resource capabilities. After that, correlation analysis is carried out as a foundation for considering when weighing indicators.

Data Analysis

Because the unit of analysis is the business enterprise, the PMS will be designed for the divisional level. The first stage of designing a PMS begins with an analysis of the company's vision and mission which express the company's broad orientation and direction to be attained before being assigned to the business units. Criteria used to evaluate the company's vision and mission were based on Wibisono (2013). Following that, a study of the company's to division's strategies is carried out as the foundation for identifying performance variables. Correlation analysis was then used to examine the main performance indicators. The benchmarking carried out is internal performance benchmarking to the Consumer Business of the same company, PT. XYZ, to identify best practice targets.

5. Analysis

Enterprise Business Competitive Force

Porter's Five Forces analysis is done for obtaining the market and competitor information and products and services. It includes five key competitive forces for analyzing the market and competitors of the Enterprise Business of PT XYZ.

In the case of providing technology and communication services for the B2B sector, the threat of new entrants is deemed high because digitization of the organization is required in this Industry 4.0 era. The bargaining power of buyers, in this case, is high because the customers are corporates, and each customer purchase products and services in large quantities. The client base is more powerful which means that each customer has more power to negotiate for lower prices and better deals. PT XYZ in providing services and products of Enterprise Business is

using subsidiaries as suppliers. So, the bargaining power of suppliers of Enterprise Business is low. The Enterprise Business of PT XYZ also has become the market leader for providing communication and technology services and products. Although there are a lot of new entrants in the industry, it still dominates the market share. Therefore, the rivalry among existing competitors is low.

Company Vision, Mission, and Strategy

The digital industry is rapidly expanding, posing new challenges for business actors. PT. XYZ responds to this challenge by establishing a vision “To be the most preferred digital telco to empower the society”. The mission of the company is defined as follows: Advance rapid buildout of sustainable intelligent digital infrastructure and platforms that is affordable and accessible to all; Nurture best-in-class digital talent that helps develop the nation's digital capabilities and increase digital adoption; Orchestrate digital ecosystem to deliver superior customer experience.

PT. XYZ's strategic framework is conceived as a portfolio direction strategy complemented by an organizational value model strategy that encompasses portfolio optimization strategies, technology, organizational structure, synergy and operational excellence, talent management and corporate culture, inorganic activities, and corporate governance.

The corporate strategy then derived into the Enterprise Business strategies as follows: Guarantee governance thru compliance program, digital lean business process alignment, and B2B IT operation model; Reshape account management strategy thru competency and career development program; Increase enterprise market share and customer experience thru value creation, focus on vertical industry and strengthening ecosystem conglomeration; PT. XYZ synergy and collaboration optimization to secure healthy profitability, sales quality, and GPM.

6. Results

Performance Indicators

Referring to the conceptual framework, the performance variables proposed in this final project consist of three perspectives and nine aspects. The organizational result perspective consists of financial and non-financial aspects. The internal process perspective consists of innovation, operation, marketing, and after-sales service aspects. The resource capability perspective consists of human, technology, and organization aspects.

Table 1: Weight Score of Main Performance Indicators

Perspectives	Aspects	Indicators	Target	Rating	KPKU Criteria	KPKU Initial Score	Weight
Organizational Result	Financial	EBITDA	Higher than previous year	<div> <div>Higher than previous year</div> <div>Same as previous year</div> <div>Less than previous year</div> </div>	Financial, Market, and Strategy Results	90	0.076
		Revenue	Higher than previous year	<div> <div>Higher than previous year</div> <div>Same as previous year</div> <div>Less than previous year</div> </div>	Financial, Market, and Strategy Results	90	0.076
		Revenue Contribution	Higher than previous year	<div> <div>Higher than previous year</div> <div>Same as previous year</div> <div>Less than previous year</div> </div>	Financial, Market, and Strategy Results	90	0.076
	Non-Financial	Customer Satisfaction	Higher than previous year	<div> <div>Higher than previous year</div> <div>Same as previous year</div> <div>Less than previous year</div> </div>	Customer Satisfaction, Market, and Strategy Results	90	0.076
		Employee Satisfaction	Higher than previous year	<div> <div>Higher than previous year</div> <div>Same as previous year</div> <div>Less than previous year</div> </div>	Employee Satisfaction, Market, and Strategy Results	90	0.076
		Supplier Satisfaction	Higher than previous year	<div> <div>Higher than previous year</div> <div>Same as previous year</div> <div>Less than previous year</div> </div>	Supplier Satisfaction, Market, and Strategy Results	90	0.076

Perspectives	Aspects	Indicators	Target	Rating	KPKU Criteria	KPKU Initial Score	Weight
Internal Process	Non-Financial	Collection Ratio	75%	<div> <div>75% - 100%</div> <div>65% - 75%</div> <div>< 65%</div> </div>	Financial, Market, and Strategy Results	120	0.102
		Number of top-10-SOE4 Served with Total Contract Value > \$ x Million		<div> <div>> 4</div> <div>3-4</div> <div>< 3</div> </div>	Customer-Focused Results	80	0.068
		Customer Recommendation	50	<div> <div>> 50</div> <div>45-50</div> <div>< 45</div> </div>	Customer-Focused Results	80	0.068
		Product Sales	Higher than previous year	<div> <div>Higher than previous year</div> <div>Same as previous year</div> <div>Less than previous year</div> </div>	Product and Service Outcomes	120	0.102
	Innovation	Idea Generation	10	<div> <div>> 10</div> <div>7-10</div> <div>< 7</div> </div>	Operational Process	45	0.038
		Idea Conversion	80%	<div> <div>80% - 100%</div> <div>60% - 80%</div> <div>< 60%</div> </div>	Operational Process	45	0.038
	Operations	Timely Completion of the Project	90%	<div> <div>90% - 100%</div> <div>80% - 90%</div> <div>< 80%</div> </div>	Operational Effectivity	40	0.034
		Managing Ensuring Project	100%	<div> <div>> 100%</div> <div>80% - 90%</div> <div>< 80%</div> </div>	Operational Effectivity	40	0.034
	Marketing	Potential Project Rate	100%	<div> <div>> 100%</div> <div>80% - 90%</div> <div>< 80%</div> </div>	Customer Expectation	40	0.034
	After-Sales Service	Customer Satisfaction with After-Sales Service	90%	<div> <div>90% - 100%</div> <div>80% - 90%</div> <div>< 80%</div> </div>	Customer Engagement	45	0.038
	Human	Employee Satisfaction Index	80	<div> <div>> 80</div> <div>70 - 80</div> <div>< 70</div> </div>	Employee Environment	40	0.034
	Technology	Digital Capabilities Readiness	100%	<div> <div>> 100%</div> <div>80% - 90%</div> <div>< 80%</div> </div>	Information and Knowledge Management	45	0.038
	Resource Capability	Culture Activation	100%	<div> <div>> 100%</div> <div>80% - 90%</div> <div>< 80%</div> </div>	Employee Engagement	40	0.034
		Strategic Initiatives Execution	100%	<div> <div>> 100%</div> <div>80% - 90%</div> <div>< 80%</div> </div>	Financial, Market, and Strategy Results	90	0.076

Linkage Analysis

The relationship between performance indicators is carried out using correlation analysis. The performance indicators analyzed are indicators that have always been present in KPIs for 2019 – 2021.

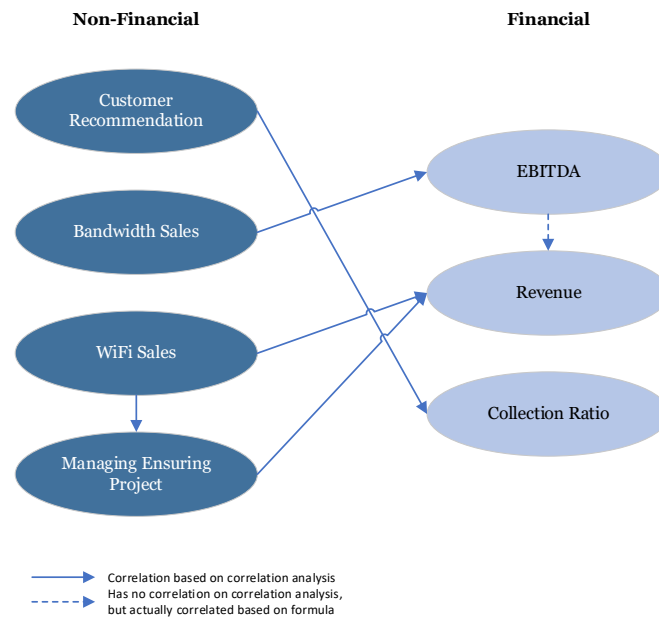


Figure 3: Relationship between Performance Indicators

Benchmarking Analysis

Due to data limitations, this research focuses on internal benchmarking. Internal benchmarking is carried out using the same indicators used in Enterprise Business KPI from 2019 – 2021. The internal benchmarking only compares the target due to data restrictions from the company.

Table 2: Internal Benchmarking

Indicators	Target		
	2019	2020	2021
Revenue	Rp 7,843.00 B	Rp 5,710.14 B	Rp 5,955.44 B
Customer Recommendation	48	52	46
Bandwidth Sales	247,000 mbps	220,000 mbps	255,000 mbps
WiFi Sales	12,000 AP	2,677 AP	3,000 AP
Managing Ensuring Project	100%	100%	100%
Collection Ratio	86.40	88.00	72.41

From the internal benchmarking carried out, there are indicators that have increased and decreased targets. There was a decrease in targets related to sales, which are sales and revenue due to changes in business conditions due to the covid 19 pandemic. In 2021, the target has increased because businesses have adapted to unplanned changes.

Display

Displays are used to communicate performance. Displays can motivate and remind employees about performance results in PMS. The display for the end-of-year performance report is in form of a spider web diagram. The Spider web diagram shows all the achievements of each indicator. The following spider web diagram shows the end-of-year performance of Enterprise Business with the indicators shown are the indicators in newly designed PMS.

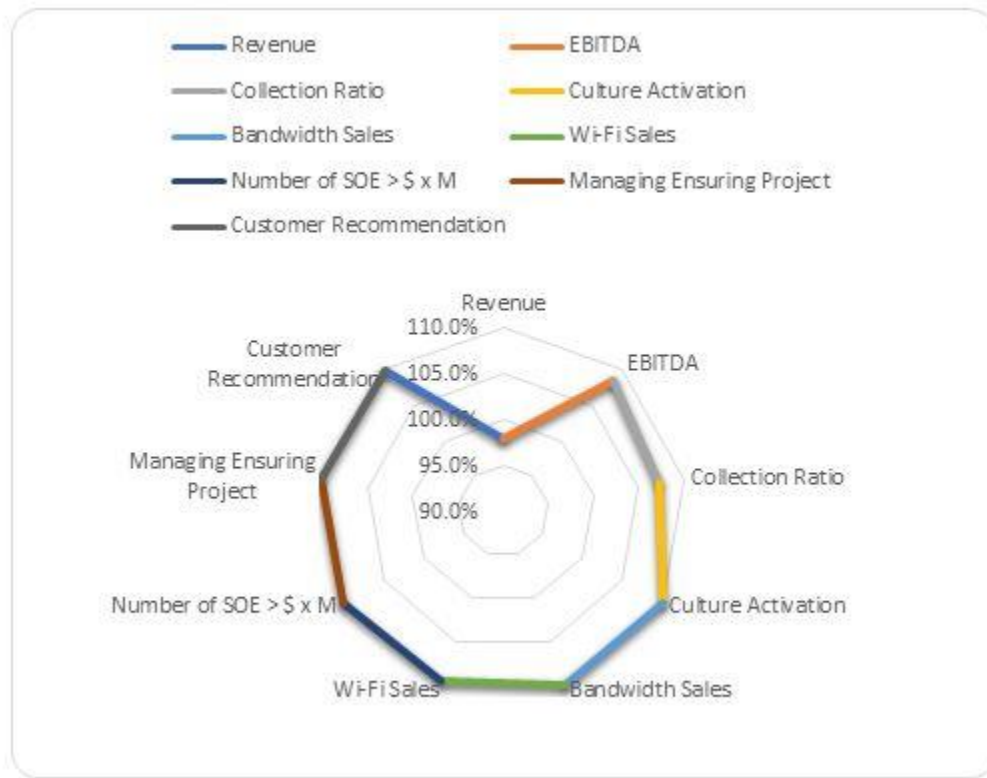


Figure 4: PMS Display

7. Conclusion

The finding of this research is a series of indicators that are based on knowledge categorized into 3 perspectives and 9 aspects. The weight of indicators is determined using KPKU scoring, which is based on MBCfPE scoring adapted for MBNQA.

These performance indicators will be used to initiate the development of an improved performance measurement system for SOEs in Indonesia at the divisional level, allowing them to be more competitive and sustainable. The study focused on the enterprise business of SOEs in Indonesia where the consumers are corporate or considered as B2B. Further research may be performed to develop implementation plans and to review or update the PMS.

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