Proposed Design of Performance Management System for Business-to-Business Information and Communication Technology of State-Owned Enterprises in Indonesia

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ABSTRACT: As the market competition for ICT products and services for businesses continues to increase, ICT B2B companies are expected to improve their performance in order to win market share. Design and implementation of Performance Management Systems (PMS) are essential components of management control systems for providing the best business solutions. This research proposes a modification of the Malcolm Baldrige Criteria for Performance Excellence (MBCfPE) and Knowledge-Based Performance Management System (KBPMS) frameworks for ICT B2B, given that MBCfPE is utilized for assessing performance excellence in SOEs. The design of the framework incorporates three perspectives: organizational results, internal process, and resource capabilities. According to the research, there are a total of x performance indicators. Using correlation analysis of historical performance indicators to determine the relationship between indicators. The weighting of the performance indicators is based on the scoring reference from MBCfPE. Therefore, the modification of KBPMS design with MBCfPE-based scoring provides an excellent depiction of the performance of B2B ICT at Indonesian SOEs.

KEYWORDS: Knowledge-Based Performance Management System, Malcolm Baldrige Criteria for Performance Excellence, Performance Management System, Performance Measurement System

INTRODUCTION

[1]Information, Communication, and Technology (ICT) is one of the most rapidly growing industries in the midst of the COVID-19 pandemic. The ICT sector expanded by 1.16 percent in 2020, from 9.42% (YoY) in 2019 to 10.52% (YoY) in 2020. (YoY). This is the result of the government's work-from-home policy designed to prevent the spread of COVID-19. Consequently, the demand for ICT-based products and services is increasing.

Using technological advancements, B2B ICT in Indonesian state-owned enterprises offer a variety of solutions to support business growth. ICT Businesses must demonstrate high performance in order to provide the best solutions for businesses. Performance Management System (PMS) is viewed not only from the perspective of human resources but also from multiple perspectives. To measure performance comprehensively, a well-designed PMS that facilitates goal attainment is required.

[2]A PMS performs consistent and quantifiable monitoring of individual and team performance. The system provides that people and teams throughout the company are aligned with and contribute to the company's strategic objectives. [3] Several situations and conditions, such as the dynamic business competitive market, laws and regulations, the need to control a variety of human behaviors, and the requirement to review strategic management to increase the company's competitive advantage, are closely linked to the need for a new PMS. Therefore, any organizational changes may require a new performance management system that accommodates the change.

[3] A knowledge-Based Performance Management System (KBPMS) was introduced due to the lack of guidance that explains the approach for designing a PMS that should be implemented in accordance with the organization's context. The KBPMS is utilized to make sure that the system is reasonable, applicable, and feasible. The system implementation is based not only on theoretical concepts but also on input from Indonesian practitioners.

The KBPMS design analyzes three perspectives and nine aspects, allowing for a comprehensive performance evaluation. Furthermore, the Indonesian Ministry of State-Owned Enterprises (SOEs) uses the Malcolm Baldrige Criteria for Performance Excellence (MBCfPE) in order to evaluate the performance of SOEs, the performance indicators will be modified so that they correspond more closely to the scoring of MBCfPE.

The objectives of this study are to build a PMS utilizing a modified MBCfPE and KBPMS for the B2B ICT of SOEs in Indonesia, to identify the appropriate weight for performance indicators, and to provide suggestions and a plan for implementing the proposed performance management system design.

LITERATURE REVIEW

[4] Performance management is a constant process of recognizing, measuring, and developing the performance of individuals and teams, as well as aligning performance with the strategic objectives of the business. This indicates that performance management ensures the success of the organization.

[3] There are a variety of strategies that may be utilized to create performance management designs. The various performance management systems include 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), and Knowledge-Based Performance Management System (KBPMS).

[3] The typical PMS has deficiencies. First, PMS is less applicable if conventional performance measuring variables are based on accounting systems and are implemented at the level of operations management due to the uncommon usage of the measures. Second, it tends to report previous performance because the financial report summarizes the company's performance at the end of the fiscal year. Third, the financial outlook is often short-term. Companies are now shifting their focus to growth, development, and sustainability. Fourthly, it is based on standardized and fixed variable metrics, which are incompatible with a dynamic competitive environment. Fifthly, the lack of effective benchmarking for internal development or external comparison results in a typical PMS that does not promote growth. Sixth, conventional PMS measures all parameters based on cost estimation. Consequently, it causes cost distortion. The Knowledge-Based approach is selected for the following reasons: Initially, a successful PMS implementation often entails a large number of performance variables, the majority of which have complex connections. To preserve the precision and consistency of decision-making, it is necessary to have supplementary tools for the priority for increasing performance elements. In order to establish a company's competitiveness, the benchmarking approach must be backed by the appropriate instruments. Due to the aforementioned characteristics, it might be challenging for business experts to select and implement the optimal strategy.

[5]The National Institute of Standards and Technology (NIST) established the Malcolm Baldrige Criteria for Performance Excellence (MBCfPE) in accordance with the Malcolm Baldrige National Quality Improvement Act of 1987, which was created by the US Congress and signed into law by President Ronald Reagan. MBCfPE is a formal quality management system acceptable in the United States for the Malcolm Baldrige National Quality Award (MBNQA). The MBCfPE was created to identify companies that may serve as examples, provide criteria for evaluating improvement efforts, and disseminate best practices.

[5]Performance excellence is an integrated strategy for managing organizational performance that improves and strengthens the organization overall, improves organizational capabilities and overall effectiveness, and manages personal and knowledge. The MBCfPE can identify an organization's distinct strengths and opportunities for improvement.

Figure 1. MBCfPE Framework

In the MBNQA, 45% of the criteria relate to the results delivered, while 55% relate to how an organization should be run. Criteria 1 through 6 (worth a total of 550 points) focus on the organization's techniques and procedures. 45% of the remaining points are allocated to the seventh criterion.

METHODOLOGY

This research adopted literature reviews in order to develop a new PMS for B2B ICT of SOE. Two of the frameworks whose characteristics were highlighted in the literature review were the KBPMS and MBCfPE. The performance characteristics elements of the KBPMS and MBCfPE that are applicable to business organizations were then used to develop a framework. In this instance, it is anticipated that the combination of KBPMS and MBCfPE will provide a more comprehensive and appropriate framework for managing the B2B ICT performance of SOE. Figure 2 illustrates the synthesis of the KBPMS and MBCfPE scoring performance measurement designs.
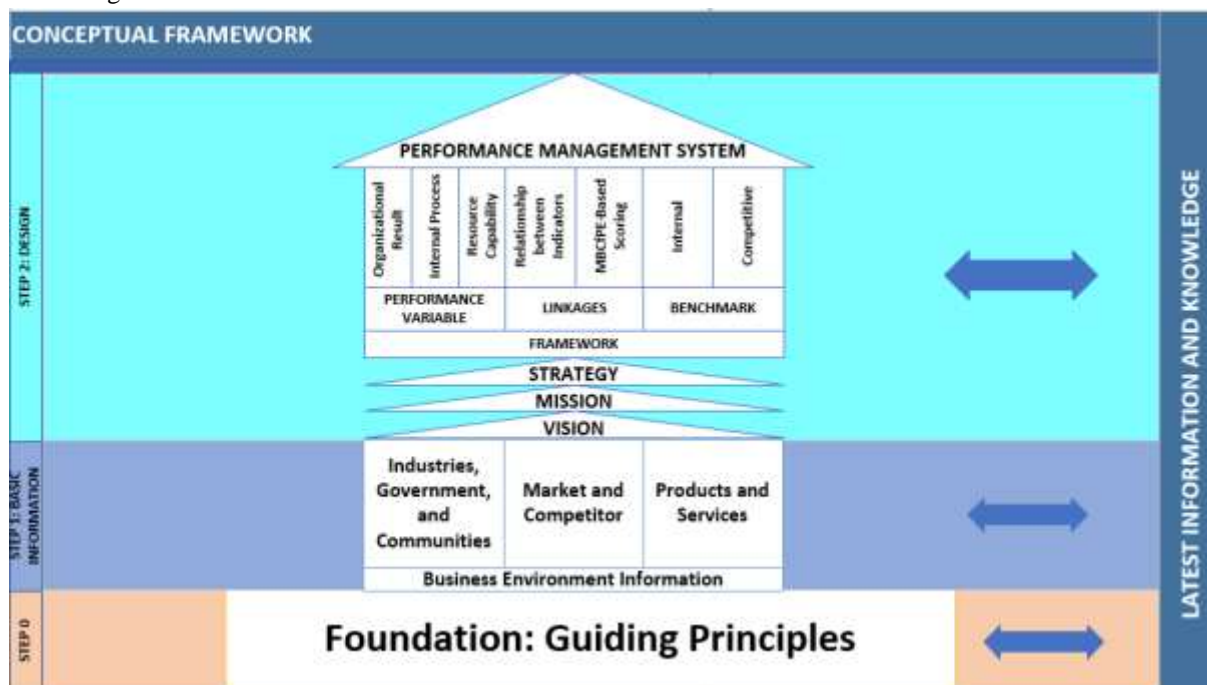

Figure 2. Conceptual Framework

There are three steps in formulating a modification of KBPMS and MBCfPE based on the above framework. The steps describe all of the information that can be used to create a new performance management system.

The majority of the information was compiled from historical records. Three historical Key Performance Indicators are used to determine the appropriate performance indicators for the years 2019 through 2021. There are nine aspects that are separated into three perspectives: organizational outcome, internal processes, and resource capacities. Following this, correlation analysis is conducted as a basis for consideration when weighing indicators.

As B2B is the unit of analysis, the PMS will be developed at the divisional level. Before assigning business units to the PMS, the first step in designing a PMS is to analyze the company's vision and mission, which express the company's broad orientation and direction. As a foundation for identifying performance variables, a subsequent analysis of the company's or division's strategies is conducted. Then, correlation analysis was utilized to evaluate the primary performance indicators. Internal competitive benchmarking is performed to identify best practice targets within an ICT company.

ANALYSIS

A. B2B ICT Competitive Force

[6]The purpose of Porter's Five Forces analysis is to obtain market and competitor information as well as products and services. It includes five key competitive forces for analyzing the B2B ICT market and its competitors.

In the case of providing technology and communication services to the B2B sector, the threat of new entrants is deemed to be high because, in this era of Industry 4.0, the organization must be digitized. In this instance, the bargaining power of buyers is high because the customers are corporations that purchase products and services in vast numbers. Each customer has a greater ability to negotiate for lower prices and better deals as the customer base is more powerful. In providing services and products, B2B ICT utilizes subsidiaries as its suppliers. Therefore, the bargaining power of Enterprise Business suppliers is low. As the ICT company is now the market leader in providing communication and technology services and products, it has become the market leader. Although there are numerous new entrants in the industry, its market share remains dominant. Therefore, competition among existing rivals is low.

B. Vision, Mission, Strategy

The digital industry is growing rapidly, posing new difficulties for enterprises. To address this challenge, it is necessary to establish the following vision: "To be the most preferred digital telecommunications company to empower society." The company's mission is defined as follows: Promote the rapid development of intelligent digital infrastructure and platforms that are affordable and available to all; Develop world-class digital talent that contributes to the growth of the nation's digital capabilities and digital adoption; Orchestrate digital ecosystem to deliver superior customer experience.

The strategic framework is conceived of as a portfolio direction strategy that is supplemented by an organizational value model strategy. This strategy includes portfolio selection strategies, technology, organization structures, collaboration, and operational excellence, talent management and corporate culture, inorganic activities, and corporate governance.

The corporate strategy was then translated into the subsequent B2B strategies: Ensure governance using a compliance program, digital lean business process alignment, and B2B IT operation model; Redesign the strategy for account management using a competency and career development program; Increase enterprise market share and customer satisfaction through value creation, vertical industry focus, and ecosystem consolidation.

RESULTS AND DISCUSSIONS

A. Performance Indicators

In reference to the conceptual framework, the performance variables proposed for this research include three perspectives and nine aspects. Financial and non-financial aspects make up the organizational result perspective. The internal process perspective includes innovation, operation, marketing, and after-sales service considerations. Human, technological, and organizational factors consist of the resource capability perspective.

Table 1. Performance Indicators for B2B ICT

Perspectives	Aspects	Indicators	Target	Rating	MBCfPE Criteria	MBCfPE Score	Weight
Organizational Results	Financial	EBITDA	Higher than previous year	🟢 Higher than previous year 🟡 Same as previous year 🔴 Less than previous year	Financial and Market Results	70	7.95
		Revenue	Higher than previous year	🟢 Higher than previous year 🟡 Same as previous year	Financial and Market Results	70	7.95

Perspectives	Aspects	Indicators	Target	Rating	MBCfPE Criteria	MBCfPE Score	Weight
		Revenue Contribution	Higher than previous year	🔴 Less than previous year 🟢 Higher than previous year 🟡 Same as previous year 🔴 Less than previous year	Financial and Market Results	70	7.95
		Debt Collection Ratio	75%	🟢 75% - 100% 🟡 65% - 75% 🔴 < 65%	Customer-Focused Results	70	7.95
	Non-Financial	Number of Corporate Customers Served with Total Contract Value > $ x Million	4	🟢 > 4 🟡 3-4 🔴 < 3	Customer-Focused Results	70	7.95
		Customer Recommendation	50	🟢 > 50 🟡 45-50 🔴 < 45	Product and Service Outcomes	100	11.36
		Product Sales	Higher than previous year	🟢 Higher than previous year 🟡 Same as previous year 🔴 Less than previous year	Value Creation Process	45	5.11
Internal Process	Innovation	Idea Generation	10	🟢 > 10 🟡 7-10 🔴 < 7	Value Creation Process	45	5.11
		Idea Conversion	80%	🟢 80% - 100% 🟡 60% - 80% 🔴 < 60%	Support Processes and Operational Planning	40	4.55
	Operations	Timely Completion of the Project	90%	🟢 90% - 100% 🟡 80% - 90% 🔴 < 80%	Support Processes and Operational Planning	40	4.55
		Project Readiness	100%	🟢 > 100% 🟡 80% - 90% 🔴 <80%	Customer and Market Knowledge	40	4.55
	Marketing	Potential Project Rate	100%	🟢 > 100% 🟡 80% - 90% 🔴 <80%	Customer Relationships and Satisfaction	45	5.11

Perspectives	Aspects	Indicators	Target	Rating		MBCfPE Criteria	MBCfPE Score	Weight
	After-Sales Service	Customer Satisfaction with Post-Project Service	90%	🟢	90% - 100%	Employee Well-Being and Satisfaction	25	2.84
				🟡	80% - 90%			
				🔴	< 80%			
Resource Capabilities	Human	Employee Engagement Index	80	🟢	> 80	Information and Knowledge Management	45	5.11
				🟡	70 – 80			
				🔴	< 70			
	Technology	Digital Readiness	100%	🟢	> 100%	Work Systems	35	3.98
				🟡	80% - 90%			
				🔴	<80%			
		Culture Execution	100%	🟢	> 100%	Organizational Effectiveness Results	70	7.95
				🟡	80% - 90%			
	Organization			🔴	<80%			
		Strategic Execution	100%	🟢	> 100%	Financial and Market Results	70	7.95
				🟡	80% - 90%			
				🔴	<80%			

B. Benchmarking Analysis

This research concentrates on benchmarking internal competitors. Comparing B2B ICT target indicators with B2C ICT target indicators is performed for internal competitive benchmarking.

Table 2. Internal Competitive Benchmarking

Business Unit	Indicators	Target		
		2019	**2020**	**2021**
B2B	Revenue	Rp 7,843 B	Rp 5,710.14 B	Rp 5,955.44 B
	Customer Recommendation	48	52	46
	Product Sales	247,000 mbps	220,000 mbps	255,000 mbps
	Project Readiness	100%	100%	100%
	Debt Collection Ratio	86.4%	88%	72.41%
B2C	Revenue	Rp 4,710.43 B	Rp 5,395 B	Rp 5,700.5 B
	Customer Recommendation	100%	Best in Class	100%
	Debt Collection Ratio Achievement	100%	100%	100%
	Culture Execution Achievement	100%	100%	100%

Indicators that have always been included in the KPI for the past three years are used for benchmarking. Table 2 demonstrates that the B2B ICT targets employ more numbers than the B2C ICT targets, which employ more percentages. [7]Well-defined objectives influence the expectations of a company's consumers, partners, and services. Targets also specify how an organization's resources will be aligned to accomplish its objectives.

C. Implementation

The PMS is implemented utilizing displays. Displays are used to convey performance information. PMS displays can encourage and remind employees of their performance results. The applicable method is a master list in Excel, as shown in Figure 3.

Figure 3. Master List Display

Figure 3 is an Excel master list that can be used to view monthly performance. If January is selected, performance metrics measured monthly in January, such as Revenue, will be displayed.

CORPORATE CUSTOMER SEGMENT	Revenue							
	Target Current Month	Realization Current Month	Achievement	Previous Year	Target Year-to-Date	Realization Year-to-Date	Achievement	Growth
			● 102.6%				● 106.1%	-6%
			● 104.7%				● 93.1%	-27%
			● 92.8%				● 100.7%	11%
			● 96.0%				● 99.2%	3%
			● 142.8%				● 134.4%	13%
			● 102.9%				● 107.7%	-12%
			● 106.7%				● 102.5%	-9%
			● 74.3%				● 97.6%	-12%
			● 87.0%				● 101.1%	1%
			● 82.4%				● 86.3%	-30%
			● 132.6%				● 112.6%	6%
			● 106.2%				● 108.7%	4%
			● 81.0%				● 99.0%	-5%
TOTAL			● 104.2%				● 105.5%	-7.0%
GAP	23				117			

Figure 4. Master List of Revenue Indicator

After selecting the month from the master list, a table containing information on targets, realization, current month and year-to-date achievements, and growth from the previous year will appear for the January revenue report for each segment.

CONCLUSIONS

This research uncovered a series of indicators based on knowledge categorized into three perspectives and nine aspects. The indicator weight is determined by adapting MBCfPE scoring to MBNQA.

These performance indicators will be utilized to initiate the development of a better performance measurement system at the divisional level for SOEs in Indonesia, allowing them to become more competitive and sustainable. The focus of the study was on the B2B ICT of SOEs in Indonesia whose customers are corporations. It is possible to conduct additional research on the relationships between indicators to aid in the evaluation of performance variables that do not meet the required standards.

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