KnE Social Sciences
ASABEC 2023
Annual Symposium on Applied Business Economics and Communication 2023
Volume 2024

Research Article

Designing an Integrated Performance Management System for a Regional Development Bank in Indonesia

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Abstract.
In recent years, one of the regional development banks in Indonesia called as PT BPD, has experienced uncertain growth in its performance. It already developed its performance management system (PMS) by adopting an approach in which the indicators are applied to the individual level. The currently implemented PMS has several flaws, including a lack of standardization of performance indicators, an unintegrated system, inefficient data entry processes, and a lack of corporate-level implementation. To address these issues we proposed a design of PMS by using an integrated performance management system (IPMS) approach. The research is proposed for the corporate level, which is limited to the stage of design. The performance variables cover the perspective of business outcome, internal process, and resource capability. Each variable will be further analyzed in the linkages and benchmarking process. Finally, this study proposes a new PMS comprised of 12 variables for business outcomes, 8 variables for internal processes, and 8 variables for resource capability. Each variable is decomposed into several indicators (48 indicators) that serve as a corporate measurement instrument.

Keywords: integrated performance management system (IPMS), performance indicator, financial services provider, regional development bank

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Published: 29 August 2024

Publishing services provided by Knowledge E

Selection and Peer-review under the responsibility of the ASABEC 2023 Conference Committee.

1. Introduction

PT BPD has been implementing its performance management system (PMS). The approach in developing PMS used is the Balanced Scorecard with a measure of job assessment aspects including financial, customer service, business processes, competence, and innovation. Every individual in the organization weighs the achievement of performance. The Human Resources Division is responsible for PMS implementation, which is overseen by the Cultural Group in the Strategic Planning Division. PT BPD's performance management system is implemented in three stages: planning, coaching, and evaluating. The PMS was established following the board of directors' decision No.

SK/031/DIR/04-2018 dated April 23, 2018, regarding performance management system implementation guidelines.

Based on the observation, PMS is still not fully implemented after nearly three years of implementation. There is a problem if multiple employees are assigned to the same position but have distinct job descriptions. This requirement cannot be met by the PMS information system. Additionally, performance data input is considered inefficient because it requires both offline and online data input. Besides, the current PMS system's weakness is that it provides only individual-level indicators. There are no performance indicators that can be used as a benchmark for assessing a company's overall performance as a single entity. These flaws present an opportunity to evaluate and improve PT BPD's PMS.

Based on previous research, the IPMS framework is designed to align with the vision, mission, and strategy of the company under investigation. There are five main steps in creating the IPMS implementation plan: developing strategy, planning strategy, aligning the organization, implementation, and monitoring and learning [1]. Another study suggests that using IPMS can improve business performance and help achieve strategic goals by establishing a clear connection between the performance management system and business strategy [2]. Additionally, the IPMS framework supports the benchmarking process, enabling the implementation of the performance management system at the corporate level [3]. Moreover, employing an integrated performance management system and effectively using its tools have the potential to rejuvenate leadership within organizations [4].

From past studies, no specific discussion has been found on how to design a performance management system for the financial services sector, specifically for regional development banks where there are a lot of financial performance indicators that can be discussed. Thus, to fill this gap, research will be conducted to design a performance management system for a financial services company. Hence, the purpose of this study is to propose a performance management system for PT BPD. The research is being conducted to accomplish the following objectives: (1) to identify performance management problems and obstacles within the company; and (2) to propose solutions and a new performance management system for PT BPD that is enhanced with a performance display to show the company's performance status.

To ascertain the root cause of PT BPD's business problems, a tool known as the current reality tree can be used [5]. Based on data collected from interviews and related

documents review, several undesirable effects (UDE) are defined in the context of performance management at PT BPD as shown in Figure 1. In the end, the current reality tree tool shows that PT BPD has an issue in the absence of adequate implementation of the performance management system at the corporate level.

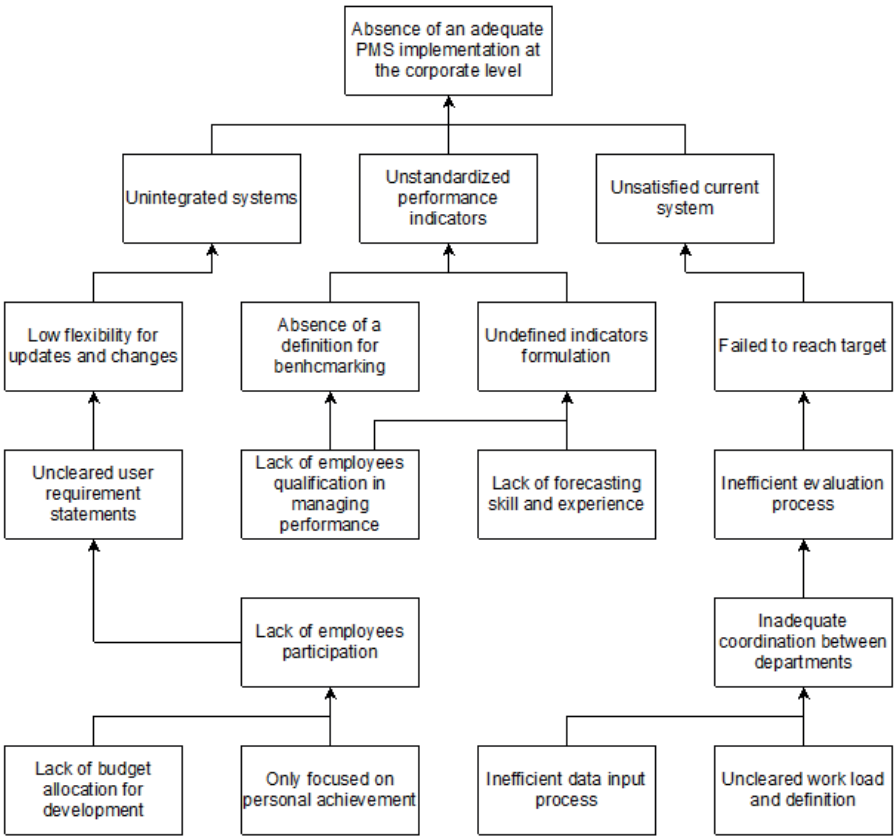

Figure 1: Root cause of PT BPD issue.

The following is an overview of the research's scope and limitations:

The research is proposed at the corporate level of PT BPD.

The stages are based on the Integrated Performance Management System (IPMS) framework, which is limited to Stage 2 – Design.

The performance variables proposed include business outcome, internal process, and resource capability perspectives.

The proposed performance management system's display will show current and target performance indicators that correspond to the variables presented.

2. Literature Review

2.1. Principles in designing performance management system

The IPMS framework is divided into four stages: the foundation stage, the basic information stage; the design stage; and the implementation stage. The following sections provide an overview of each stage [6].

Stage 0 (Foundation): An understanding of the guiding principles that must be used as the foundation for designing a performance management system includes an understanding of the existing approaches to the performance management system, the essence of the performance management system, and the contextual nature of the performance management system.

Stage 1 (Basic information): The fundamental data required for the design of a performance management system, which is primarily concerned with the current business environment, includes information about the industry, government and society, markets and competitors, and the products and services produced by the company.

Stage 2 (Design): It is the performance management system's design phase. It entails establishing the vision and mission, the strategy and framework to be used, the relationships between variables, and the appeals to be made. The determination of the company's vision, mission, and strategy does not begin from scratch in this project but instead begins with a review of existing ones. The relationship between variables is established by interconnecting them across perspectives. Additionally, internal and external benchmarking is conducted.

Stage 3 (Implementation): The implementation phase entails supported displays, report design, PMS socialization to all employees, process modification if necessary, training to be followed, implementation resources to be involved, and transitioning from the current PMS to the new PMS. Essentially, this research is limited to the design stage.

Stage 4 (Refreshment): This stage is an evaluation of the performance management system, which was designed with the most recent information and knowledge developments in mind. This stage is excluded in this article according to the scope of the research.

IPMS is composed of three perspectives: business outcomes, internal processes, and resource capability. The following Table 1 details the parameters or aspects associated with each of these perspectives. The outcome of a business is composed of two components: financial and non-financial. The financial aspect is the primary focus of

shareholders' attention because it determines the soundness of banking financing. Many of the available PMS frameworks focus exclusively on the financial aspect of the organization. Through this IPMS, business outcomes are expanded to include non-financial factors [6].

Table 1: IPMS perspectives and aspects [6].

Perspective	Aspect	Definition
Business Outcome	Financial	Concerning the fulfillment of investors' or shareholders' wishes and expectations. Each type of business has different key performance indicators.
	Non-Financial	Providing services that meet customer expectations, adhering to government and community regulations, and sharing value with suppliers.
Internal Process	Innovation	Describes a company's competitiveness in terms of its ability to survive in the face of technological advancements.
	Operations	Operations management includes product development and supplier relations, product and service control, distribution management, and regulatory and social process control.
	Marketing	The key to achieving organizational goals is identifying target markets and efficiently delivering the goods or services that customers demand.
	After Sales	Concerning the quality of service, customer satisfaction, and the after-sales service provided in comparison to competitors.
Resource Capability	Human Resource	Associated with competitive recruitment, systematic training, increasing employee satisfaction, employee qualifications, and employee empowerment.
	Technology Resource	Comprises integrated hardware and software components that work together to create a more effective and efficient system.
	Organizational Resource	The organization's capacity for rallying and sustaining the change processes necessary for strategy implementation.

3. Research Method

This research aims to design a performance management system using the IPMS (Integrated Performance Management System) framework. The proposed PMS will be implemented at the corporate level and will adhere to the scopes and constraints outlined in the previous explanation. A conceptual framework (see Figure 2) is developed through the stages of idea generation by identifying current issues, analyzing them, evaluating them, and structuring them. If a correlation exists between the problems and the purpose of the research, the next step would be to propose a solution and its implementation plan.

The problem is analyzed through the collection of primary and secondary data at PT BPD and throughout the national banking industry. The collected data will be analyzed using the appropriate tools for describing the structured problem. If the issue is related to the scope of performance management research, a new PMS will be proposed based on a review of the IPMS framework's literature. The PMS design refers to Phase 2 – Design with inputs from the benchmarking process. Additionally, the implementation plan will be partially based on Phase 3 – Implementation, which will be used to visualize the new system that will be built.

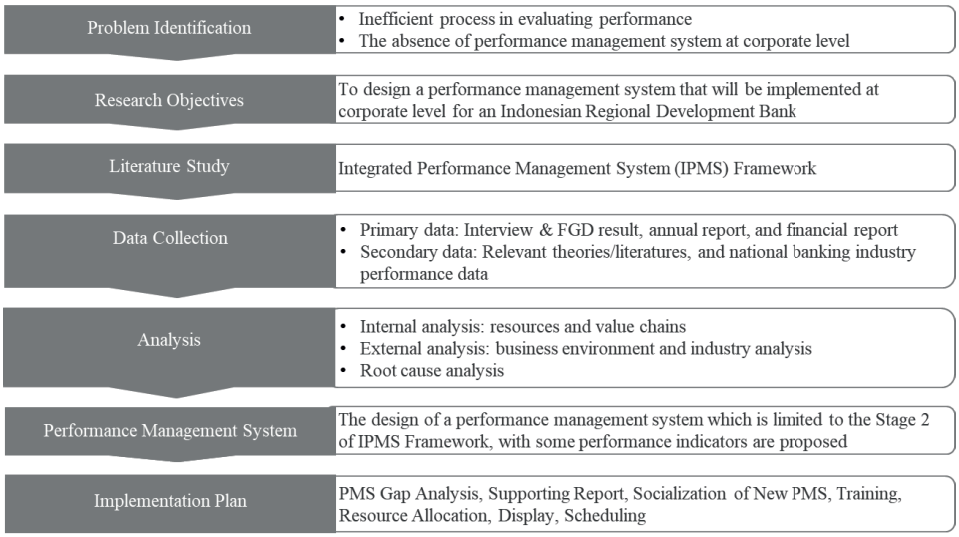

Figure 2: Conceptual framework.

The study will be accomplished through the implementation of a case studies research strategy for PT BPD. A case study is a type of research strategy that entails an empirical examination of a specific contemporary phenomenon in its real-world context using a variety of data collection methods [7]. Business research methods are frequently classified as quantitative, qualitative, or mixed methods. In this instance, a qualitative approach will be used to propose a new PMS, the details of which are contained in Table 2 below.

Data collection is needed as the input for the project to be analyzed. Two types of data will be used for this project: primary and secondary data.

3.1. Primary data

Primary data is the data collected from original sources for a specific purpose, in this case for research purposes. Primary data can be obtained through deep interviews,

TABLE 2: Summary of data collection and source.

No	Research Stage	Tools/Framework	Data Source
1	Preparation	Secondary data review	Corporate annual report and literature study
2	Preliminary Survey	Observation and secondary data review	Corporate performance overview
	Data Collection	Interview and assessment form	Eight persons from various departments
	Data Evaluation	Current reality tree, internal & external analysis, AHP, and Forecasting	Data collected and literature study
3	Solution Formulation	IPMS framework	Data collected and literature study
4	Implementation Plan	Gantt chart, user interface	Result of evaluation

observation, questionnaires, physical measurement, and unobtrusive [8]. According to the perspective or aspect used in the variable design, data collection was carried out by deep interviews and focus group discussions with key employees in certain divisions. It is expected that through deep interviews and focus group discussions, valuable insights will be obtained in determining performance indicators in PMS. An interview guidance and assessment form will be used to obtain the primary data.

3.2. Secondary data

Secondary data are data that have been collected by others for another purpose than the purpose of the current study. Evaluating secondary data is needed before it is used. Criteria for evaluating secondary data include timeliness of the data, accuracy of the data, relevance of the data, and cost of the data [8]. The study literature will be conducted to support the analysis. Supporting documents will be also analyzed for research purposes.

Interviews are conducted by appointing key employees to related divisions within the company. Topics discussed in the data collection were current Performance Management in PT BPD and aspects that will be used to formulate the corporate PMS. These aspects include human resource, marketing, consumer, technology, operations, government & community, organizational capital, and financial. Table 3 describes the targeted informants.

When conducting the deep interview, the researcher would ask the questions specified in the interview guidance to gain insight into the current state of PMS and its

TABLE 3: List of informants.

Key Topic	Employee	Department
Performance Management in PT BPD	YT	Strategic Planning Division
	MA	Human Resource Division
Human Resource Aspect	MA	Human Resource Division
Marketing and Consumer Aspect	YF	Marketing Division
	RB	Corporate Secretary Division
Technology Aspect	DT	Technology and Digitalization Division
Operations and Innovation Aspect	AR	General Division
Government and Community Aspect	FB	Compliance Division
Organizational Capital Aspect	YT	Strategic Planning Division
Financial Aspect	AY	Finance and Information Division

VARIABLES FOR FINANCIAL ASPECTS

Source: **Finance and Information Division**

[I] Variables	[II] Definition or Objective	[III] Is the data available?	[IV] What is the importance scale?	[V] Included in new PMS?	[VI] Notes
Asset management ratio	To assess the efficiency of a company in utilizing its assets	☒ Yes ☐ No	☐ 1 ☐ 2 ☐ 3 ☒ 4 ☐ 5	☐ Yes ☒ No	
Business growth	Trends that show the development of the company's scale	☒ Yes ☐ No	☐ 1 ☐ 2 ☐ 3 ☒ 4 ☐ 5	☐ Yes ☒ No	
Total assets	Total assets/wealth owned by the company	☒ Yes ☐ No	☐ 1 ☐ 2 ☐ 3 ☒ 4 ☐ 5	☒ Yes ☐ No	Modified to asset quality variable
Return on Asset (ROA)	Assessing the company's ability to gain profit from the assets used in the	☒ Yes ☐ No	☐ 1 ☐ 2 ☐ 3 ☒ 4 ☐ 5	☒ Yes ☐ No	Combined in profitability variables
Net Interest Margin (NIM)	Measuring the ability of bank management in managing its productive assets to generate net interest income.	☒ Yes ☐ No	☐ 1 ☐ 2 ☐ 3 ☒ 4 ☐ 5	☒ Yes ☐ No	Combined in profitability variables
Operating Expenses to Operating Income (BOPO)	The ratio between total operating expenses and total operating income, of which the ratio is taken into account per position.	☒ Yes ☐ No	☐ 1 ☐ 2 ☐ 3 ☒ 4 ☐ 5	☒ Yes ☐ No	Included in operations variable
Non-Performing Loan Ratio (NPL)	Measuring the percentage of non-performing loans resulting from the customer's non-payment in installment payments	☒ Yes ☐ No	☐ 1 ☐ 2 ☐ 3 ☒ 4 ☐ 5	☒ Yes ☐ No	Modified to receivable collectability variable
Loan to Deposit Ratio (LDR)	Loans to deposits ratio used to assess bank liquidity	☒ Yes ☐ No	☐ 1 ☐ 2 ☐ 3 ☒ 4 ☐ 5	☒ Yes ☐ No	Included in liquidity variable
Capital Adequacy Ratio (CAR)	Capital adequacy ratio useful to accommodate the risk of bank losses	☒ Yes ☐ No	☐ 1 ☐ 2 ☐ 3 ☒ 4 ☐ 5	☒ Yes ☐ No	Included in capital adequacy variable
Credit and Financing	Total loans and financing disbursed	☒ Yes ☐ No	☐ 1 ☐ 2 ☐ 3 ☒ 4 ☐ 5	☒ Yes ☐ No	Moved to the operations aspect

Figure 3: Indicators to be included in the proposed PMS.

various aspects. Following that, the researcher will use an assessment form to help determine which indicators should be included in the proposed PMS. To be included in the proposed PMS, all interviewees must assign a value of 5 to these indicators (the example of the assessment form as shown in Figure 3). It is to ensure that all internal PT BPD parties understand the critical nature of the indicator being discussed.

4. Result and Discussion

4.1. Business strategy

According to PT BPD's corporate plan for the year 2017-2021, they focused on some activities: transformation program, increasing retail banking market share, business development in MSME (Micro, Small, and Medium Enterprise), and enhancing human resources. The faster transformation is implemented by focusing on the improvement of organizational structure, corporate culture, priority business instruments, and leading products. In the second stage of IPMS, it is needed to reformulate PT BPD's strategy to align with current business environmental conditions. Thus, there will be proposed strategies based on the business strategy diamond developed by Hambrick & Fredrickson [9]. The components of the strategy include arena, vehicle, differentiators, staging, and economic logic. Table 4 below is the analysis of the business strategy diamond for PT BPD.

To complete the strategy formulation based on the business strategy diamond, a company must define core competencies that are advantages over competitors. In addition to this, a reformulation of the strategy is also needed to anticipate dynamic environmental changes. The following Table 5 will explain how the strategies will be linked to the proposed variables.

4.2. Deciding performance indicators target

Setting targets for each indicator on the proposed variables is essential in the design of the new PMS. It is helpful to see the progress of performance achievement based on the targets that have been set. At the time of implementation, a performance display will also be designed to show the target's progress. For example, pay attention to asset indicators. PT BPD targeted that in 2020 it will achieve a total asset of 24,617,882 million rupiahs. However, it turned out that PT BPD had realized assets of 25,559,008 million rupiahs. It means that the bank fulfilled 103.82% of the set target, which means it exceeded expectations. The determination of the performance target will be used on the PMS display, which shows the realization compared to the expected target at the time of performance review or evaluation. The determining of the target value for each indicator can be done in three ways:

Table 4: PT BPD's strategies.

Component	Analysis
Arena	Taking part in financial service provider in the segment of a regional development bank that complies with the Financial Services Authority and Central Bank. The product/service is divided into two categories: conventional and sharia. In the future, it will be completely transforming into sharia banking. Targeting customers in some provinces in Indonesia.
Vehicle	Implementing transformation programs aimed at increasing retail banking market share, business development in MSME, and human resource qualification. Internal development through specific transformation programs in areas such as organizational structure, corporate culture, strategic business instruments, and market-leading products. Adhere to all applicable regulations, conventional reporting standards, and sharia reporting standards in their entirety Improving the capability using the capital with principles of efficiency and effectiveness. Enhancing the bank's technology infrastructure to ensure secure transactions and increase fee-based income.
Differentiator	The status of PT BPD is the only regional development bank in the province, so its activities are fully supported by the provincial government. Offering high return on deposit investment to improve community funding. Lower or free monthly service charge for certain products.
Staging	**Improve internal factors** such as capital restructuring, optimization of product delivery, cost efficiency, rapid development of sharia businesses, and improve customer satisfaction. **Increase the market penetration** by reaching out to the remote and potential areas to increase the service availability and increase the market share in the province. **Product development** by identifying improvement opportunities, and executing the regular improvement of current products/services. **Market development** by reaching areas outside of its headquarters area with high market potential
Economic Logic	PT BPD generates income from: Interest income from conventional bank activities. Sharia profit sharing from Sharia bank activities. Fees and commissions not related to loans consist of securities sales commissions, insurance premiums, and commission provision of bank guarantees. Recoveries from write-off loans. When loans are deemed uncollectible, they are written off against the related allowance for impairment losses. Other operating income includes: Administration revenue from ATM and BPD-net machines Fines, principal, interest, and fees revenue Safe deposit box rental Reimbursement of printed material Bank reference Western Union service

Forecasting model: Forecasting model using several models such as trending model, moving average with length = 2, and double exponential smoothing (using Minitab software). The model chosen is the model with the smallest error number. The entire model uses historical data for each indicator within the last decade.

Table 5: Mapping strategies to variables.

Strategy	Linked Variables	
Implementing transformation programs aimed at increasing retail banking market share, business development in MSME, and human resource qualification.	CU01	Customer Satisfaction
	CU02	Customer Service
	MK01	Customer Growth
	MK02	Market share
	OP04	Credit and Financing
	OP05	Community Fund
	HR01	Employee Loyalty
	HR02	Employee Qualification
	HR03	Employee Satisfaction
	HR04	Employee Productivity
Internal development through specific transformation programs in areas such as organizational structure, corporate culture, and strategic business instruments	OR01	Culture
	OR02	Leadership
	OR03	Teamwork and Knowledge Sharing
Adhere to all applicable regulations, conventional reporting standards, and sharia reporting standards	GC01	Compliance
	GC02	Occupational Health and Safety
	GC03	Public Sentiment
Improving the capability using the capital with principles of efficiency and effectiveness.	FI01	Asset
	FI02	Capital
	FI03	Receivable Collectability
	FI04	Capital Adequacy
	FI05	Solvency
	FI06	Liquidity
	FI07	Profitability
	OP02	Operational Efficiency
Enhancing the bank's technology infrastructure to ensure secure transactions and increase fee-based income.	OP01	Infrastructure availability
	OP03	Fee-Based Income
	TR01	Technology Availability
	IN01	Innovation success

Favorable state: The favorable state is retrieved from the statement of informants in the variable assessment form.

Related research: The customer variable for waiting time to get a teller and customer service refers to the previous research of [10]. While the technology availability variable on the average downtime of ATMs refers to the research of [11].

Table 6 below explains the target value for each indicator. Exceeding the target is not always a preferable condition. For example, in the liability to equity ratio (LER) indicator, the higher the LER ratio, the worse it will be on PT BPD's performance. So, it is crucial to keep the LER value below the specified target. It does not apply to indicators that may be good for the company if they exceed the target, like the total asset indicator

Table 6: Performance indicator target.

Aspect	Variable	Indicator	Target	Consideration
Business Outcome Perspective				
Financial	Asset	Total Assets	26.500.918	Forecasting
		Quality Earning Asset	2,64%	Forecasting
	Capital	Core Capital	3.265.727	Forecasting
		Paid-In Capital	1.758.514	Forecasting
	Receivable Collectability	Non-Performing Loan	19,61%	Forecasting
	Capital Adequacy	Capital Adequacy Ratio (CAR)	3,10%	Forecasting
	Solvency	Liabilities To Equity Ratio	621,70%	Forecasting
		Liabilities To Assets Ratio	76,95%	Forecasting
	Liquidity	Loan To Deposit Ratio (LDR)	92,82%	Forecasting
	Profitability	Net Income	342.050	Forecasting
		Net Profit Margin	22,53%	Forecasting
		Net Interest Margin	6,53%	Forecasting
		Return On Equity	9,98%	Forecasting
		Return On Asset	1,70%	Forecasting
		Current Account Saving Account	46,44%	Forecasting
Customer	Customer Satisfaction	Satisfaction Rate	90%	Favorable State
		Average waiting time to proceed with loan requests	7 days	Favorable State
		Average waiting time to get teller services	15 minutes	Related Research
		Average waiting time to get customer services	30 minutes	Related Research
	Customer Service	Complaint-handling success rate	90%	Favorable State
		Feedback follow up	90%	Favorable State
		Complaint-handling duration	90%	Favorable State

TABLE 6: Continued.

Aspect	Variable	Indicator	Target	Consideration
Business Outcome Perspective				
Government and Community	Compliance	Number of violations of regulation or standards	0	Favorable State
		Number of code of ethics violations	0	Favorable State
		Total fines for violations	0	Favorable State
	Occupational Health and Safety	Number of accidents or injuries during the work period	0	Favorable State
	Public Sentiment	Percentage of positive to negative sentiment	95%	Favorable State
Internal Process				
Innovation	Innovation success	Percentage of successful innovation programs	100%	Favorable State
Operations	Infrastructure availability	Infrastructure availability rate	90%	Favorable State
	Operational Efficiency	Operational expenses to operational revenues (BOPO)	85,36%	Forecasting
	Fee-Based Income	Fee-based income	233.980	Forecasting
	Credit and Financing	Credit and financing	20,44	Forecasting
	Community Fund	Community fund	21,7	Forecasting
Marketing	Customer Growth	Customer growth	6%	Favorable State
	Market share	Market share – asset	38,33%	Forecasting
		Market share based on third-party funds	42,62%	Forecasting
		Market share based on credit/financing	33,71%	Forecasting
Resource Capability				
Human Resource	Employee Loyalty	Employee turnover	5%	Favorable State
		Percentage of employees who have been working for > 10 years	40%	Favorable State
	Employee Qualification	Percentage of employees who have at least a diploma degree	75%	Favorable State
		Percentage of employees who have formal certification	50%	Favorable State
	Employee Satisfaction	Employee satisfaction rate	80%	Favorable State
	Employee Productivity	Net income per employee	233.980	Forecasting
Technology Resource	Technology Availability	Rate of fulfilled technology procurement	90%	Favorable State
		Average downtime of ATM	120.000 min	Related research

Table 6: Continued.

Aspect	Variable	Indicator	Target	Consideration
Resource Capability				
Organizational Resource	Culture	Culture understanding rate	75%	Favorable State
	Leadership	Leadership effectiveness index	75%	Favorable State
	Teamwork and Knowledge Sharing	Teamwork and knowledge-sharing quality	75%	Favorable State

4.3. Performance variables

According to the IPMS Framework, three perspectives can be used to formulate the performance variables: business outcome, internal process, and resource capability. Each perspective is derived into some aspects (aligned with PT BPD's needs). The aspects used in this study are explained in the following Table 7. The determination of performance variables and indicators results from interviews and discussions with key employees and the results of studies of supporting documents. The proposed variable should be applying the SMART criteria. It stands for specific, measurable, achievable, relevant, and timetable [12].

Table 7: Variable perspective and aspect [6].

Perspective	Aspect
Business Outcome	Financial
	Non-Financial: Customer, Government and Community
Internal Process	Innovation
	Operations
	After Sales Service
Resource Capability	Human Resource
	Technology Resource

This study proposes a new PMS comprised of twelve variables of business outcomes, eight variables of internal processes, and eight variables of resource capability. Each variable is derived into several indicators that serve as a corporate measurement instrument. 48 indicators are proposed to be assigned to the responsible departments. The relationship between performance variables will help decision-makers if there are variables that do not reach the target. They are capable of identifying additional

variables in various dimensions that are related to it. The relationships between each variable at PT BPD are depicted in Figure 4.

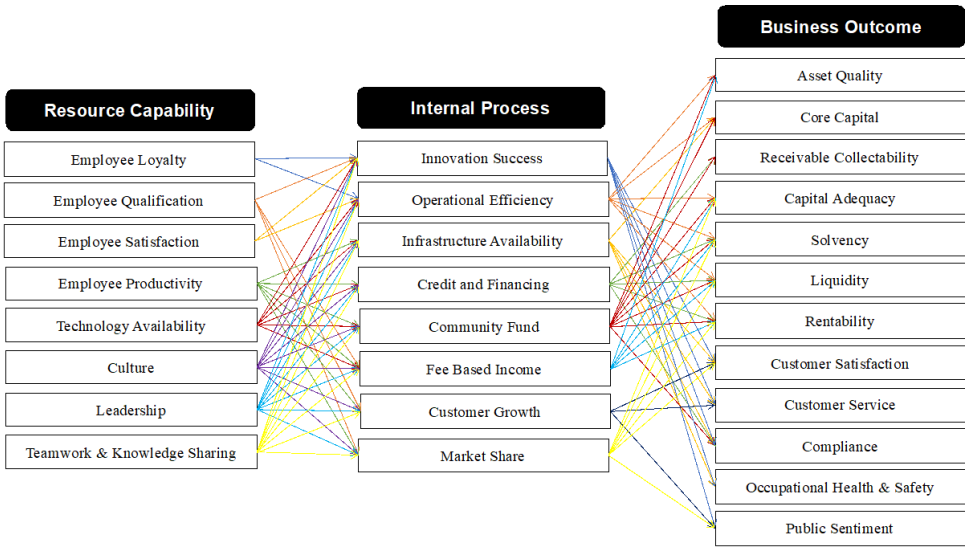

Figure 4: Variable linkages.

4.4. Internal benchmarking

Benchmarking is defined as the process of improving performance by continuously identifying, understanding, and adapting outstanding practices and processes found inside and outside of the organization [13]. Additionally, benchmarking can be accomplished by collecting and comparing internal and external data [14]. Internal benchmarking is conducted by comparing its current performance to historical data. The variables used in the benchmarking process correspond to those in the new proposed PMS. The historical data being compared spans PT BPD's ten-year operation to visualize the growth trends. Certain variables, however, are not fully available for the past ten years. The study compares year-over-year growth on the proposed indicators to determine the extent to which company performance fluctuates. PT BPD must pay attention to indicators that differ between trend data and what is preferred. An evaluation is needed for those indicators which are not showing expected results as elaborated in the following Table 8.

As can be seen in the following Table 9, some variables such as compliance, operational efficiency, market share, employee turnover, employee qualification, and employee productivity need further evaluation since the data trend has differed with the preferable situations. On the other hand, PT BPD should maintain its performance

Table 8: Financial aspect benchmarking.

Variable	Indicator	Trend	Preferable	Action
Asset	Total asset	Increasing	Increasing	Maintain
	Earning asset quality	Increasing	Increasing	Maintain
Capital	Core capital	Increasing	Increasing	Maintain
	Paid-in capital	Increasing	Increasing	Maintain
Receivable Collectability	Non-Performing Loan	Increasing	Decreasing	Evaluate
Capital Adequacy [15]	Capital Adequacy Ratio	Increasing	Increasing	Maintain
Solvency	Liabilities to equity ratio	Decreasing	Decreasing	Maintain
	Liabilities to assets ratio	Decreasing	Decreasing	Maintain
Liquidity	Loan to Deposit Ratio	Uncertain	Decreasing	Evaluate
Profitability [16]	Net Income	Increase	Increase	Maintain
	Net Profit Margin	Uncertain	Increasing	Evaluate
	Net Interest Margin	Decreasing	Increasing	Evaluate
	Return on Equity	Decreasing	Increasing	Evaluate
	Return on Asset	Decreasing	Increasing	Evaluate
	Current Account Saving Account	Decreasing	Increasing	Evaluate

in the variables of occupational health and safety, fee-based income, community funds, and credit financing. The analysis result will be better if the company can record or collect the data aligned with its primary strategy for digitalization activities. Having proper data and the capability to monitor and evaluate will be a substantial requirement for conducting benchmarking.

4.5. External benchmarking

External benchmarking is performed by comparing PT BPD's performance to that of related businesses using crucial performance indicators from the OJK's Indonesia Banking Statistics. It will compare PT BPD's performance to that of its headquarter's regional economy (see Table 10), national commercial banks, all regional development banks in Indonesia, and all commercial banks classified as Commercial Banks Group of Business Activities II.

TABLE 9: Non-financial aspect benchmarking.

Variable	Indicator	Trend	Preferable	Action
Business Outcome: Government and Community				
Compliance	Number of violations of regulations and standards	Uncertain	Zero	Evaluate
	Number of violations of code of ethics	Uncertain	Zero	Evaluate
	Total fines for violations	Uncertain	Zero	Evaluate
Occupational Health and Safety	Number of accidents or injuries during the work period	Zero	Zero	Maintain
Internal Process: Operations				
Operational Efficiency	Operating expenses to operating income	Increase	Decrease	Evaluate
Fee-Based Income	Fee-based income	Increase	Increase	Maintain
Community Fund	Total third-party funds	Increase	Increase	Maintain
Credit and Financing	Total provision of credit/loans and financing	Increase	Increase	Maintain
Internal Process: Marketing				
Market Share	Market share based on asset	Uncertain	Increase	Evaluate
	Market share based on third-party funds	Increase	Increase	Maintain
	Market share based on credit/financing	Uncertain	Increase	Evaluate
Resource Capability: Human Resource				
Employee Loyalty	Employee turnover	Uncertain	Decrease	Evaluate
	Percentage of employees who have been working for more than 10 years	Increase	Increase	Maintain
Employee Qualification	Percentage of employees who have at least a diploma degree	Decrease	Increase	Evaluate
Employee Productivity	Average sales turnover per employee	Uncertain	Increase	Evaluate

4.6. Current and proposed gap

In the current performance management system, the company's primary objective is to ascertain how well individuals perform. The assessment is made based on whether or not the job description is met and the objective is met. By implementing a new PMS, the existing PMS can be enhanced, monitored, and evaluated at the corporate level which is shown in the following Table 11.

Table 10: PT BPD's performance compared to regional economy indicator in december 2020.

Indicators	Provincial Banking Industry			PT BPD Performance			
	2019	2020	Growth	2019	2020	Growth	Contribution (2020)
Third-Party Funds	45.771	46.502	1,60%	19.479	20.408	4,77%	43,89%
Current Account	6.970	4.699	-32,58%	2.606	2.141	-17,85%	45,56%
Savings	23.734	27.478	15,77%	6.456	6.797	5,28%	24,73%
Time Deposits	15.067	14.325	-4,92%	10.417	11.471	10,12%	80,07%
Credit	58.872	60.206	2,27%	18.933	19.530	3,16%	32,44%
Working Capital	20.867	22.726	8,90%	4.719	3.850	-18,40%	16,94%
Investment	10.622	9.451	-11,03%	718	1.685	134,81%	17,83%
Consumer	27.382	28.029	2,36%	13.496	14.007	3,79%	49,97%

Table 11: Comparison between current and proposed PMS.

Comparison	Current PMS	Proposed PMS
Scope	Individual level	Corporate level
Perspective	Financial, customer, internal, competency, and innovation	The business outcome, internal process, and resource capability
Aspect	Limited to each position or job description	Not limited, emphasizes all aspects of the company
Data input	Twice, offline and online	Once, online through the interface
Modification	Enabled, manually	Enabled, through the interface
PMS display	Not supported	Supported
Benchmarking	Not supported	Supported

4.7. PMS display

The statement suggests that in previous studies [2,3], the presentation of PMS (Performance Management System) data was limited to charts that displayed only certain indicators. However, the complete set of indicators was not presented in its entirety on the display. In other words, the visual representation of the PMS data was incomplete, as it only focused on specific aspects or selected indicators rather than providing a comprehensive and holistic view of all the relevant performance metrics.

This observation implies a potential limitation in the previous research methodology or data presentation approach. The term "PMS Display" likely refers to the visual representation or graphical interface used to communicate performance metrics. The statement suggests a need for improvement in how PMS data is visually presented,

emphasizing the importance of showing the entire range of indicators for a more thorough understanding of performance across various dimensions. This could involve designing a more comprehensive display that incorporates all relevant indicators, allowing for a more nuanced and comprehensive analysis of the performance data.

The PMS display is designed by providing a web-based user interface where the manager can see the external benchmarking performance (see Figure 5), the overall current performance status vs. target performance for each perspective (see Figure 6), and the overall performance for each indicator (see Figure 7). The user interface takes the form of a website prototype that can be simulated to demonstrate the flow of modules and interaction between users and the PMS. The primary purpose of this PMS display is to serve as an integrated platform for managing all aspects of corporate performance. Users can monitor performance progress, conduct internal and external benchmarking, modify indicators/variables, etc. To accomplish this goal, the PMS prototype's main modules and the flow of each module are being elaborated which is provided in Table 12.

4.8. Scheduling

The project phase is based on the PMBOK (Project Management Body of Knowledge) produced by the Project Management Institute [17] and the System Development Life Cycle [18]. For the objectives of this project, the procedures have been categorized into initiation, planning, design, development, testing, and deployment, as illustrated in Figure 8. The comprehensive timeline for the implementation plan spans 187 working days.

5. Conclusion

PT BPD has implemented a performance management system to evaluate individual performance using an approved approach. PT BPD has the opportunity to implement a broader perspective on the scope of the current PMS, not only at the individual level but also at the corporate level. It serves as a tool for the company to determine how well it performs at the corporate level, which encompasses all aspects of its business. Additionally, PT BPD can conduct internal and external benchmarking using the new PMS to compare its performance to historical and industry data.

Table 12: Modules in the PMS display.

Module	Purpose	Interaction
Login Module	Authenticating the user's attempt to log in. Not all PT BPD employees have access to the system; only those with specific roles and authorities do.	Type the institution's email. Type the password.
Dashboard or Home Module	To illustrate the current state of key indicators and to compare PT BPD to competitors or the industry.	Tap "Add Unit" to modify the indicators in the PMS. Only verified modification will be included in the system. Tap "Download" to get the data of external benchmarking. Tap "Add new" to update the data of external benchmarking. Only verified data will be included in the system. Tap other perspectives to move the window.
Perspective Module	To present all variables in a single perspective. The module displays a list of all variables in button mode.	Tap "View all" to show overall performance of each indicator in a perspective. Tap the button of variable name to see more detailed progress of each variable.
Variable Module	To demonstrate internal benchmarking over a specified time period. There are two duration options: this year or all time. It illustrates each indicator's progress toward the target and its growth in comparison to the previous month/year.	Tap "Download" to get the data of internal benchmarking. Tap "Add new" to update the data of each indicator's progress. Only verified input will be included in the system. Tap the indicator name to change the data to the other indicators in the same variable.
Add Unit Module	To alter existing variables or indicators. The user may delete or modify existing variables or indicators. Additionally, they may incorporate new variables or indicators into pre-existing PMS.	Fill the add unit form Tap "Submit" to send the new data. Only verified input will be included in the system. Tap "Cancel" to back to previous page.
Add New Module	To update the data of each indicator in the PMS including the data for external benchmarking.	Fill the "add new" form to entry the data Tap "Submit" to send the new data. Only verified input will be included in the system.
Logout Module	Logging out from the PMS Display. Users will be able to safely exit the system to avoid unintended changes.	Tap "Log out" to quit from the PMS Display.

The design of IPMS takes three perspectives into account: business outcomes, internal processes, and resource capabilities. Each perspective is further subdivided into several aspects. The business outcome encompasses financial, customer, and government & community outcomes. Internal processes include innovation, operations, and marketing. Furthermore, resource capability encompasses human, technological, and organizational assets. This study proposes a new PMS comprised of twelve variables for business outcomes, eight variables for internal processes, and eight variables for

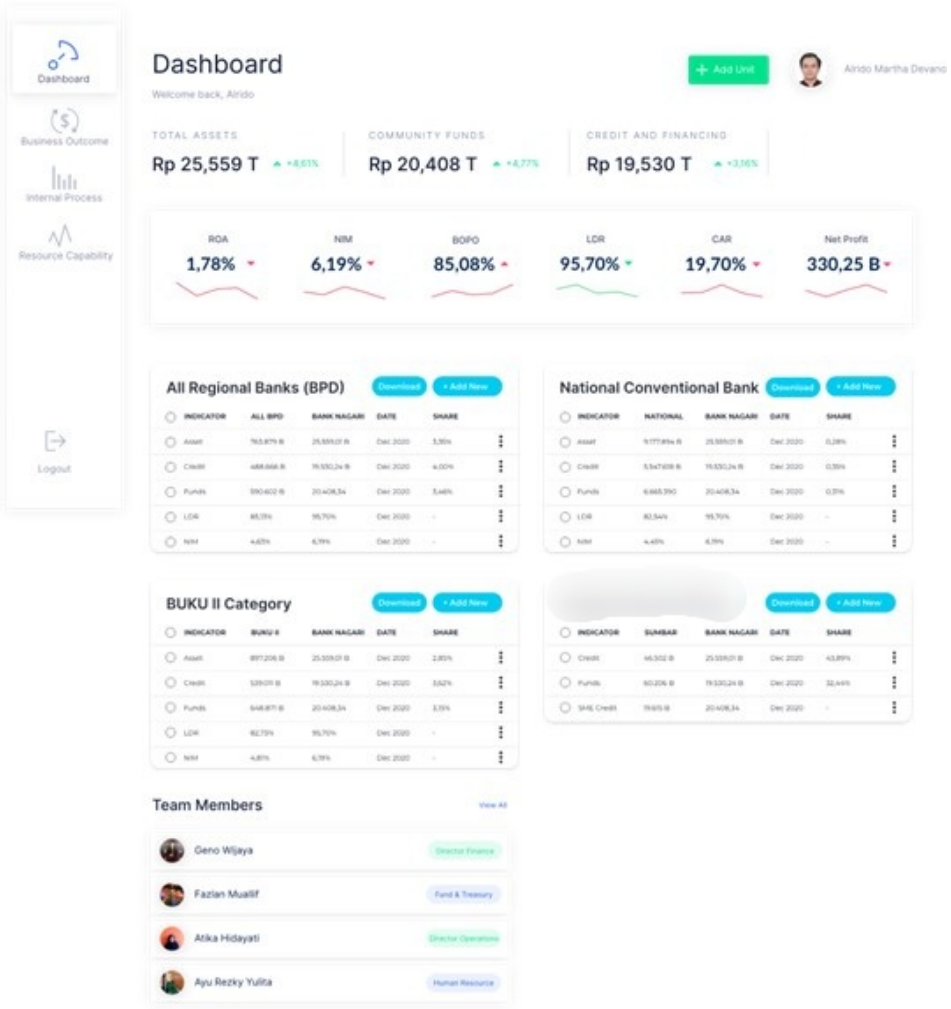

Figure 5: Proposed PMS dashboard interface.

resource capability. Each variable is decomposed into several indicators (48 indicators) that serve as a corporate measurement instrument.

Each proposed variable corresponds to one or more indicators, each of which has a specific goal in terms of performance. The target unit and value can be changed depending on the availability of data and the intent of the person(s) in charge of determining them. The target can be determined using a variety of methods, including forecasting, related research, internal targets, and favorable states. The goal should be to ensure that the regulations implemented in the Republic of Indonesia through the OJK and Central Bank are followed.

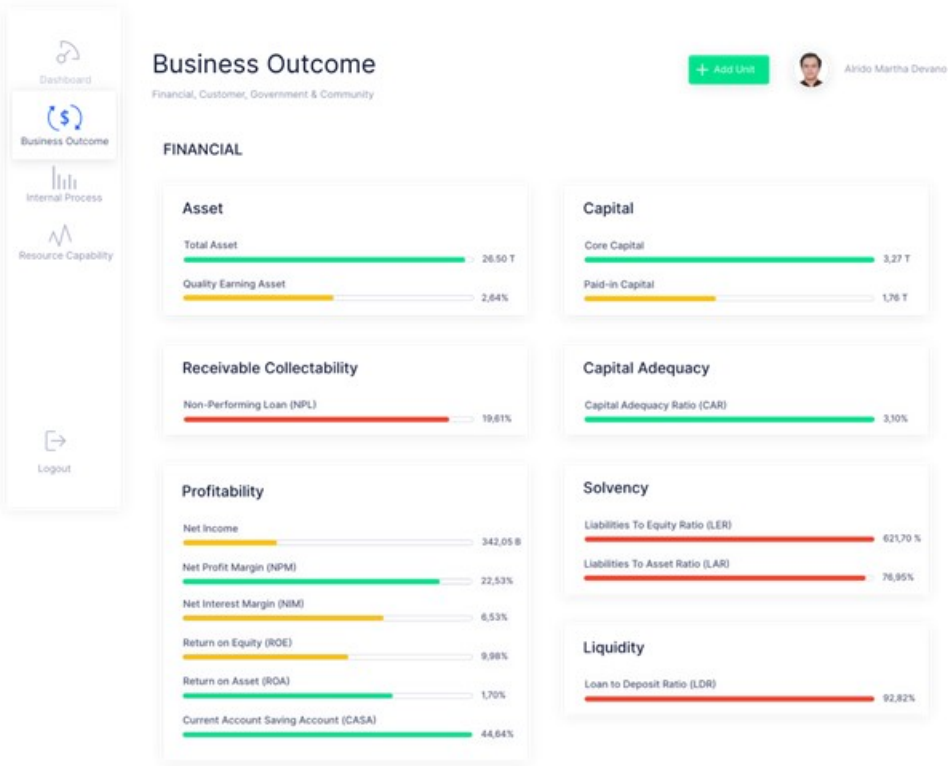

Figure 6: Overall performance in a perspective of business outcome.

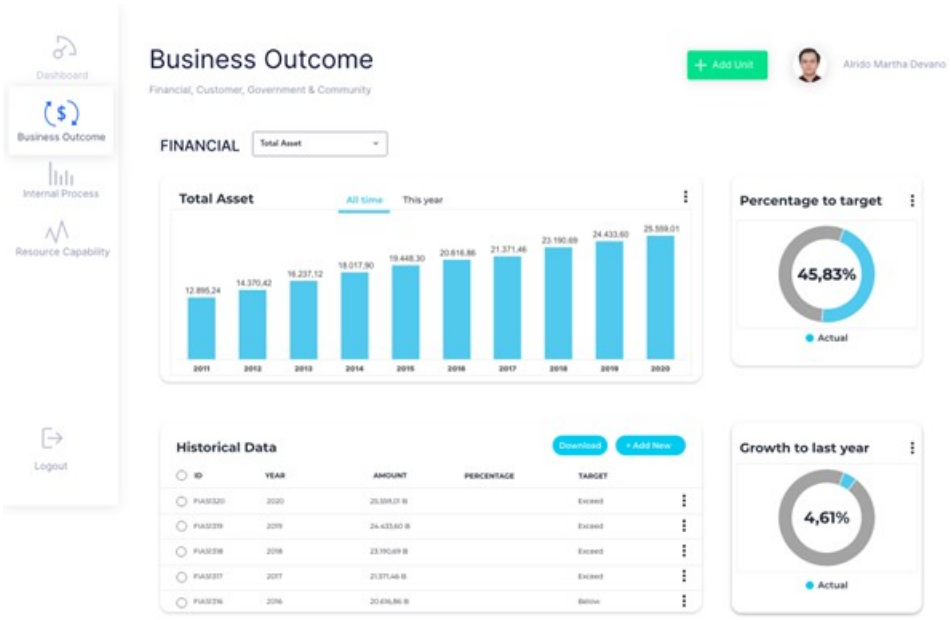

Figure 7: Performance indicator overview.

Acknowledge, Funding & Ethics Policies

In presenting this article, “Designing an Integrated Performance Management System for a Regional Development Bank in Indonesia” we extend our heartfelt gratitude to

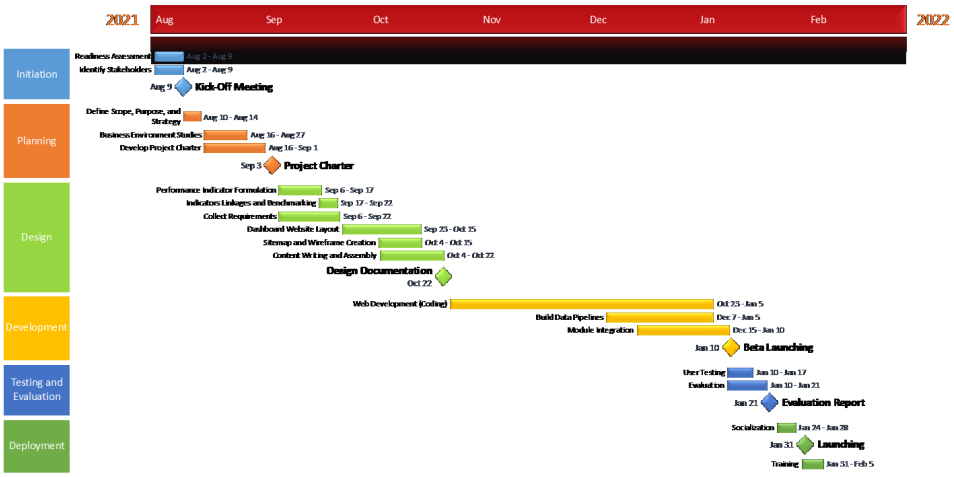

Figure 8: Implementation schedule.

the individuals and institutions that have played pivotal roles in its realization. Our sincere appreciation goes to the dedicated team at the PT BPD for their willingness to collaborate and share their insights, which formed the foundation of our case study. Their openness and cooperation greatly enriched the depth of our research. We are indebted to the scholars and experts in the field of performance management, whose scholarly works and guidance provided the necessary framework and direction for this study. Furthermore, we acknowledge the support and encouragement from our academic mentors, whose expertise and constructive feedback propelled us forward. Lastly, we express our gratitude to all those who, in various capacities, have contributed to the completion of this endeavor, reaffirming the significance of collective effort in scholarly pursuits.

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