



INTEGRATION OF PERFORMANCE MANAGEMENT WITH RISK MANAGEMENT USING THE RISK-BASED PERFORMANCE MANAGEMENT MODEL TO IMPROVE COMPANY PERFORMANCE

Andri Sahputra^{1*}, Meilita Tryana Sembiring², Nazaruddin³

^{1,2,3}Magister Manajemen, Universitas Sumatera Utara, Indonesia

E-mail: andri.shepa@gmail.com^{1*}, meilita@usu.ac.id², nazarmttd60@gmail.com³

Received : 15 May 2026

Revised : 19 May 2026

Accepted : 20 June 2026

Published : 08 July 2026

Abstract

This study aims to formulate an integrated model for performance and risk management through a Risk-Based Performance Management (RBPM) approach to improve company performance at PT XYZ, an airport operator. The research is motivated by the continued failure to meet several performance indicators, suboptimal operational cost efficiency, and the lack of integration between risk management and performance management, which prevents risk information from fully supporting strategic decision-making. In addition, the results of the risk maturity assessment indicate that there are still gaps in governance, process integration, and the use of risk data and technology. The study uses a qualitative descriptive approach with a case study at PT XYZ. Data were obtained through analysis of company documents, performance reports, risk profile reports, Risk Maturity Index (RMI) assessment results, observations, and interviews with related work units. The analysis compared the existing conditions of performance management and risk management implementation with the Risk-Based Performance Management framework to identify gaps and formulate improvement plans. The results show that performance management and risk management are still running partially, risk appetite has not been consistently internalized in target setting, and performance indicators, risk indicators, and control indicators are not yet connected in an integrated system. The RBPM model is designed to integrate Key Performance Indicators (KPIs), Key Risk Indicators (KRIs), and Key Control Indicators (KCIs) through strategic alignment, risk appetite, dashboard-based monitoring, and an early-warning system. Implementing this model can improve decision-making quality, strengthen governance, enhance organizational resilience to uncertainty, and encourage more stable, measurable, and sustainable performance.

Keywords: Performance and Risk Integration, Performance Management, Risk Management, Risk-Based Performance Management, Risk Appetite

INTRODUCTION

PT XYZ in carrying out its role as a manager, operator of airport services (aviation), and airport-related services (non-aviation) is committed to implementing the principles of good corporate governance at all levels of the company, one of which is realized in the form of implementing risk management to ensure the achievement of the Company's Vision and Mission and the creation of value for the company and stakeholders. To maintain the quality of the company's products and services, achieve company targets and objectives, and ensure business resilience and sustainability, PT XYZ implements risk management and continuously strives for continuous improvement. The management of corporate risk aims to increase the certainty of achieving company goals and targets by minimizing potential losses from downside risk and optimizing upside risk. The implementation of PT XYZ's risk management has not been fully effective in protecting value by minimizing obstacles in achieving targets and creating value by exploring opportunities for the company. The ineffectiveness of risk management has an impact on the achievement of several company performance indicators, where the realization is still below the target.

Based on Aeronautics production performance in 2025, several production indicators remain below target, including PJP4U production with an achievement of 91%, PJP2U production with an achievement of 98%, and Aviobridge production with an achievement of 98%. Meanwhile, for non-aeronautical production in the same year, namely 2025, Rental production obtained better achievements with an achievement of 109%, and concession production with an achievement of 103%. However, for Fuel Throughput Charge (FTC) production, it was not achieved at 92% for either value or vehicle parking.

Looking at previous years, namely 2023 and 2024, several company performance indicators also indicate that the company failed to achieve its targets, although not on the same indicators. However, these performance achievements reflect the company's inconsistent growth, with several indicators achieving below 100%. Based on production performance in 2024, the PJP4U production achievement in 2024 was 96%, the PJP2U production achievement was 94%, the counter achievement was 95%, and Aviobridge was 100%. Therefore, compared to 2025, production growth was less consistent, with declines in performance for PJP4U and Aviobridge achievements. Conversely, there was a better increase in performance for PJP2U and the counter.

For performance in 2023, PJP4U achieved positive performance with achievements above 100%, while PJP2U (Passengers) recorded negative performance, with achievements below 100% (97.2%). Rental performance also recorded positive results, with an average above 100%, followed by Cargo (PJKP2U) at 89.9%. Based on production data for 2023, 2024, and 2025, it can be concluded that the company's performance is not consistent enough to sustain sustainable growth. This condition shows that the company is less effective in managing performance or less effective in managing obstacles or constraints in achieving targets, in this case, managing risk.

If we look at operational cost management performance, actual operational cost use remains above target, with an average cost realization above 100%. This condition explains that there are cost components that were not planned or that are sudden in nature, meaning risks were not identified from the start and require risk management and additional costs. Based on financial realization performance in 2023, the actual operational costs in 2023 were 117.8%, resulting in a 17.8% overrun outside the RKAP. The realization of operational costs in 2024 was 103%, resulting in a 3% overrun. The realization of operational costs in 2025 was 99%, which is in line with the target. However, a more detailed analysis shows that the realization of maintenance costs within operational costs was still overbudget by 109%, or IDR 121 billion, above the RKAP, and utility expenses were 109%, or IDR 83 billion, above the RKAP.

The failure to achieve several company targets indicates that risks are not well managed or that performance management is not integrated or aligned with risk management. Several risks are not aligned with the company's targets and goals, as described in the following conditions:

1. The risk of low passenger and aircraft traffic growth where the residual realization drops from moderate to high to low to moderate (better than the moderate target) can be concluded as effective risk management as per the 2024 Risk Profile and Non-Aeronautical Production Performance 2025, however this condition is not in line with production achievements according to Production Performance in 2024, where for the achievement of PJP4U (number of aircraft) and the achievement of PJP2U (number of passengers) there was a decrease with each achievement of 96% and 94%. The same condition also occurred in 2025, as in Table 1, the risk of achieving business revenue below the RKAP target with the residual risk value dropping from a high level to a moderate level (effective) because it is in accordance with the residual target. However, when viewed against the value of non-achievement of Rp 461 billion, the value remains high.
2. The risk of increasing expenses based on the risk monitoring report has decreased the risk level from moderate to high to moderate (effective risk management); however, when linked to the performance achievement of expense realization, there is still an overbudget for employee expenses and operational expenses, according to Financial Realization Performance in 2024, with an achievement of 108% and 103%. Risk management in 2025, as Aeronautical Production Performance in 2025, also shows a similar condition: although overall realization has reached 99%, several cost items, such as maintenance and utility costs, remain overbudget.

Table 1. Risk Profile for 2025

No	Risk Event	Monitoring Risk Report		
		Inherent Risk	Realization Residual Risk	Target Residual Risk
1	Obstacles in implementing post-merger human resource policies	19 Moderate to High	11 Low to Moderate	11 Low to Moderate
2	Strategic program value is decreasing	24 High	13 Moderate	13 Moderate
3	Business revenue is below the budget plan target	24 High	13 Moderate	13 Moderate
4	Increase in business expenses exceeds budget targets.	23 High	11 Low to Moderate	11 Low to Moderate
5	A decrease in the company's ability to meet short-term obligations.	18 Moderate to High	13 Moderate	11 Low to Moderate
6	Land asset ownership disputes	18 Moderate to High	13 Moderate	11 Low to Moderate
7	Cyber attacks	24 High	11 Low to Moderate	11 Low to Moderate

Source: Risk Management Report of 2025

Table 2. Risk profile for 2024

No	Risk Event	Monitoring Risk Report		
		Inherent Risk	Realization Residual Risk	Target Residual Risk
1	Resistance to cultural change	18 Moderate to High	6 Low to Moderate	6 Low to Moderate
2	Business process changes through the concept of regionalization	19 Moderate to High	6 Low to Moderate	14 Moderate
3	Accounts receivable are quite large due to the merger.	24 High	16 Moderate to High	18 Moderate to High
4	Failure and delay in enjoying the benefits of BPHTB relaxation.	23 High	13 Moderate	13 Moderate
5	Delay in obtaining PMK.56	23 High	13 Moderate	13 Moderate
6	Harmonization of 2 systems into 1 system	14 Moderate	8 Low to Moderate	8 Low to Moderate
7	The potential for increased cargo traffic cannot be optimized	18 Moderate to High	2 Low	13 Moderate
8	Delay in implementing new regulations after the merger	18 Moderate to High	6 Low to Moderate	11 Low to Moderate

9	Low growth in passenger and aircraft traffic	18 Moderate to High	6 Low to Moderate	13 Moderate
10	Increased business costs	18 Moderate to High	13 Moderate	13 Moderate

Source: Risk Management Report of 2024

The suboptimal management of corporate risk is also reflected in the results of the Risk Maturity Index Assessment for the 2024 Financial Year at PT XYZ which includes five test dimensions, namely Risk Culture and Capabilities, Organization and Governance, Risk Framework and Compliance, Risk Process and Control Dimensions, and Risk Models, Data, and Technology at PT XYZ for the 2024 Financial Year is "Developing Phase (+)" with a score of 2.88 according to table 3. Based on the assessment results, it is concluded that PT XYZ has not aligned the company's strategic plan with the risk assessment process, as the risk assessment is not carried out based on business processes. There has also been no formal response from risk owners to the submission of risk profile reports. Meanwhile, based on the dimensions of risk models, data, and technology, the use of the Early Warning System (EWS) in the Enterprise Risk Management Information System dashboard is not optimal, as EWS information is sourced from Key Risk Indicators in the risk profile, leaving a need for comprehensive and relevant information.

Table 3. Achievement of Maturity of Risk Management Implementation

Dimensional Aspect				
Parameter	Dimension	Description	Dimension Score	Score
1 - 3	1	Risk Culture and Capabilities	3,00	
4 - 19	2	Organization and Risk Governance	2,73	
20 - 33	3	Risk and Compliance Framework	3,00	
34 - 40	4	Risk Process and Control	3,00	
41 - 42	5	Risk Models, Data and Technology	2,50	
Dimensional Aspect Score				2,88

Source: 2024 Risk Maturity Index Assessment Report

In a study by Mestchian & Cokins (2010), RBPM can reduce strategy execution failures, increase performance stability and predictability, and encourage long-term value creation. Laisasikorn and Rompho (2014) stated that there is a significant, positive relationship among ERM success, the effectiveness of performance measurement systems, and a company's financial performance. Goldstein (2018) stated that ERM integration in strategic planning is an important paradigm shift in modern management. Integrated ERM supports strategy achievement, improves decision quality, and strengthens long-term performance. Xu et al. (2019) revealed that risk-based performance evaluation provides a more comprehensive approach than conventional evaluation in e-waste management. Djohanputro (2024) stated that Risk-Based Performance Management is not just a conceptual trend, but a strategic necessity for modern companies in facing business uncertainty. Fatima et al. (2024) concluded that integrating risk in the Public-Private Partnership project performance assessment system can reduce the potential for project failure, enhance monitoring effectiveness, and promote the long-term success of infrastructure projects.

By observing the conditions where there is still a misalignment between performance management and risk management (silo), risk communication that is not based on the best information, ineffective risk communication and gaps in the risk maturity index assessment, it is clear that the implementation of risk management at PT XYZ is not fully integrated with the company's performance management and causes risks not to be managed effectively in achieving company targets. Therefore, an in-depth study is needed to formulate appropriate recommendations in implementing a company strategy that is integrated with the implementation of risk management to improve company performance through a Risk-Based Performance Management (RBPM) approach.

LITERATURE REVIEW

Corporate Performance Management

Performance management is an integrated system that aims to improve the effectiveness of organizations, teams, and individuals through planning, monitoring, developing, evaluating, and rewarding performance (Armstrong & Baron, 2004). Meanwhile, according to Aguinis (2019), performance management is an ongoing process aimed at identifying, measuring, and developing individual and team performance and aligning that performance with the organization's strategic objectives. In this context, performance management is not simply an annual monitoring or evaluation tool, but rather a dynamic and ongoing cycle.

From a strategic management perspective, Kaplan and Norton (2001) introduced the Balanced Scorecard (BSC) as a performance management framework that focuses not only on financial dimensions but also on customer perspectives, internal business processes, and learning and growth. This framework is an important foundation in modern performance management because it allows organizations to translate corporate vision and strategy into a comprehensive set of measures. Kaplan and Norton (2004) explain that the BSC was designed to address one fundamental problem in strategic management: the gap between what is stated as strategy and what actually happens on the ground.

Marr (2012) defines KPIs as navigation tools that organizations use to understand whether they are moving toward strategic goals or deviating from the path. One of the most popular frameworks for assessing the quality of a KPI is the SMART criteria, first introduced by Doran (1981) in the context of goal setting. In the context of KPIs, SMART stands for specific or unambiguous, measurable or objectively measurable, achievable or realistic to achieve, relevant to strategic goals, and time-bound or having a clear measurement period. However, some experts argue that SMART alone is not enough. Marr (2012) adds two important criteria for KPIs: they must be actionable, meaning that concrete actions can be taken based on the information, and owned, meaning that one person or team is responsible for the performance indicator.

Risk Management

According to ISO 31000 (2018), risk is defined as the impact of uncertainty on objectives. The ISO 31000 standard establishes risk management principles, frameworks, and processes that organizations across sectors, sizes, and activities can apply. Meanwhile, the Committee of Sponsoring Organizations of the Treadway Commission (COSO, 2017) defines risk as the possibility of an event occurring that impacts the achievement of business strategies and objectives.

Risk management principles serve as the foundation for establishing a risk management framework and process. They provide guidance on the characteristics of effective and efficient risk management implementation and convey the values it embodies. A risk management framework serves as the foundation for risk management governance and outlines how an organization's risk governance will be implemented. The function of a risk management framework is to assist organizations in integrating risk management into all organizational functions and activities. The risk management process is a series of systematic steps to help target owners manage opportunities and threats to achieving objectives in a systematic, measurable, and controlled manner. The risk management process must be an integral part of management and decision-making, and integrated into the organization's structure, operations, and processes.

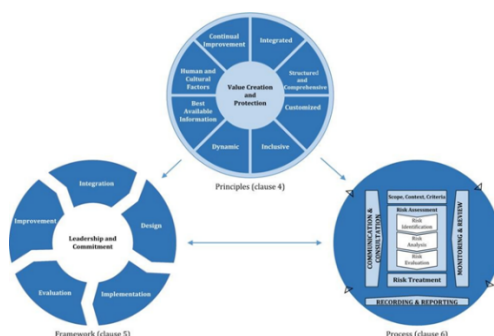


Image 1: ISO 31000:2018 Risk Management Components

Risk Appetite & Risk Tolerance

The Institute of Risk Management (IRM, 2011) defines risk appetite as the total amount of risk an organization is willing to accept or sustain to achieve its strategic objectives. Meanwhile, according to COSO (2017), risk appetite is the type and amount of risk an organization is willing to accept in pursuing value. Determining risk

appetite is the responsibility of the Board of Directors or top management, as this statement directly influences the organization's strategic direction and resource allocation in managing risk. Risk tolerance is the limit of acceptable deviation from risk appetite or from established performance targets (COSO, 2017). Risk tolerance is often expressed in more specific, measurable quantitative terms than risk appetite. Risk tolerance becomes an operational parameter used by the organization in day-to-day risk decision-making, while risk appetite serves more as a strategic guide for top management.

Key Risk Indicator

KRIs serve as early warning signals that indicate an increase in potential risks before they actually materialize into losses (Scandizzo, 2005). Effective KRIs must measure aspects relevant to the primary risk sources and directly related to the organization's established risk appetite and tolerance. Mature risk management implementations generally integrate KRIs into the same management dashboard as KPIs, allowing management to simultaneously monitor performance and risk in a single, integrated view. This approach aligns with the concept of Risk-Based Performance Management.

Risk Maturity Index

The Risk Maturity Index (RMI) is a measurement tool used to assess the extent to which an organization has developed and implemented effective risk management practices. The RMI provides a comprehensive overview of an organization's position in terms of risk management maturity. Decree of the Deputy for Finance and Risk Management Number: SK-8/DKU.MBU/12/2023, where the RMI levels start from the initial phase (score 1-1.8), the developing phase (score 1.9-2.8), the good practice phase (score 2.9-3.8), the better practice phase (score 3.9-4.8), and the best practice phase (score 4.9-5).

Risk-Based Performance Management

The Risk-Based Performance Management (RBPM) approach was developed as a management model that combines strategic management and risk management processes within a single, systematic, integrated framework. Smart and Creelman (2013) argue that RBPM is not simply a combination of the two but rather a new paradigm that positions strategic risk as a fundamental component in the implementation of an organization's strategy. The RBPM approach emphasizes the need to build a more comprehensive indicator system in which Key Performance Indicators (KPIs) are combined with Key Risk Indicators (KRIs) and Key Control Indicators (KCIs). These three indicators provide information that not only assesses target achievement but also monitors risk and the effectiveness of controls in keeping the organization within its established risk appetite. Through this integration of indicators, organizational management obtains a more complete picture of the relationship between performance achievement, risk profile, and internal control mechanisms.

Integration of Strategy and Risk

The integration of strategy and risk is a key foundation of the RBPM approach. From this perspective, risk is not a separate supporting function to strategic planning, but rather an inherent component of the strategy formulation and execution process. According to Smart & Creelman (2013), risk, specifically risk appetite, must be central to implementing an organization's strategy. In other words, an effective strategy is designed and executed within explicitly defined risk tolerance limits.

Risk-Based Performance Management (RBPM) Framework

The RBPM framework, according to Smart & Creelman (2013), is an integrated model that connects strategic management, performance management, and risk management into a single organizational system to eliminate the dichotomy between strategic planning and risk management, which in traditional practice are often separate. The RBPM framework comprises several main components that interact with one another, as shown in Image 2. According to Smart & Creelman (2013), there is a relationship among strategy, performance management, and risk management, with risk aligned with strategy until performance management is centered on risk preferences and risk appetite.

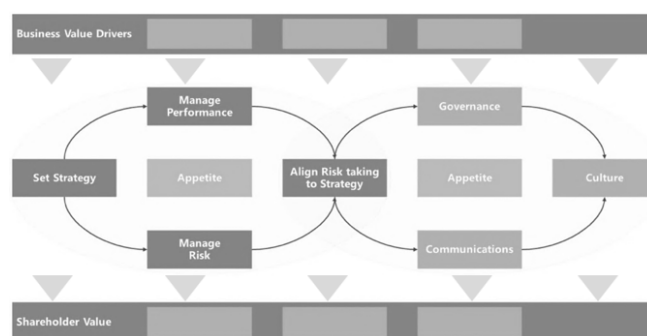


Image 2: RBPM Framework

Implications of RBPM on Improving Company Performance

In the context of RBPM, the use of risk-based performance indicators helps management assess the strategy's effectiveness more comprehensively. RBPM also has implications for improving a company's performance stability in uncertain business environments. According to Leone et al. (2017), integrating risk and performance contributes to the stability of a company's financial results. According to Power (2016), the added value of risk management arises when risk becomes an integral part of the strategic control system rather than a mere compliance function. From a strategic perspective, RBPM contributes to the creation of sustainable competitive advantage. The integration of risk and performance enables organizations to identify innovation opportunities while proactively managing market uncertainty. According to Behl & Dang (2022), the alignment between risk governance and strategic management processes is a critical determinant in improving company performance.

Framework of Thinking

This research framework is based on performance management (KPIs), risk management (KRI), and risk appetite, implemented in an integrated manner through a Risk-Based Performance Management (RBPM) model. In RBPM, performance measurement is complemented by influencing risks by setting targets within the risk appetite corridor. In contrast, risk monitoring is complemented by a threshold that serves as an early warning system for deviations in performance achievement, enabling management to take remedial action to minimize threats and optimize opportunities immediately. Therefore, the implementation of Risk-Based Performance Management is expected to improve company performance. This framework is systematically outlined in Image 3.

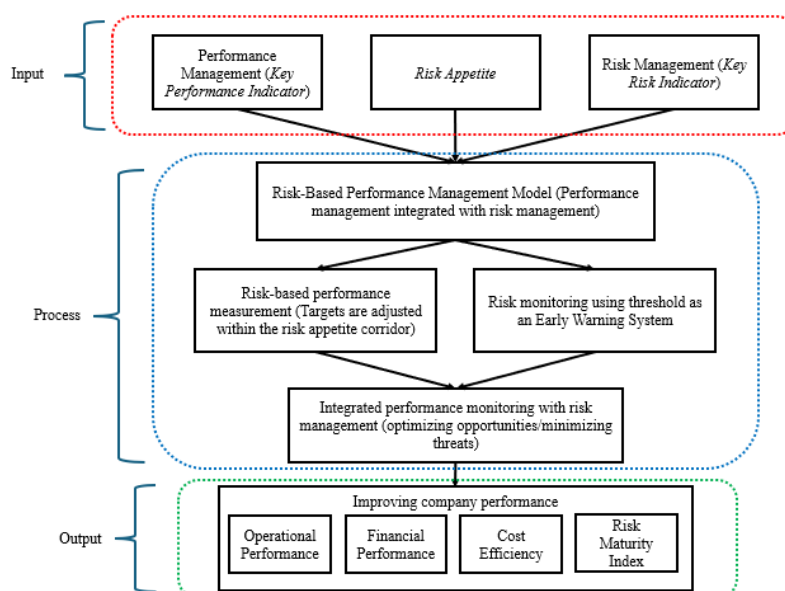


Image 3: Thinking Framework

METHOD

This research uses a qualitative descriptive approach with a case study method at PT XYZ. This approach is used to analyze the company's performance and risk management and to develop a Risk-Based Performance

Management model appropriate to the company's conditions. Data collection techniques are used to obtain valid, in-depth information on the processes of formulating and monitoring KPIs and risk management for company performance. Data collection is carried out through interviews, documentation, observation, and Focus Group Discussions (FGD). Data analysis methods used in this study include descriptive analysis, gap analysis, risk-based performance management analysis, risk priority analysis, and implementation strategy analysis. This research is conducted through several problem-solving stages, systematically arranged to develop a Risk-Based Performance Management model to improve PT XYZ's performance.

RESULTS AND DISCUSSION

Design Results

Table 4 illustrates the integration of KPIs, KRIs, and KCIs, which can be used to monitor a company's performance progress. This worksheet can help companies address issues in performance and risk management. Each indicator is equipped with a threshold to signal the company to take action. For KCIs, a red or yellow threshold indicates that controls have not been implemented to facilitate certain business processes in achieving targets or to minimize risks, allowing management to take early action to evaluate the controls in place. A green KCI threshold indicates that controls have been implemented in accordance with procedures, allowing management to focus more on changes in the company's environment. For KRIs, a red threshold signals that a potential risk affecting certain performance is imminent, requiring management to take immediate action to minimize the risk by implementing planned risk management or changing the company's strategy.

Table 4. Alignment of Performance Management with Risk Working Paper

Perspektif (BSC)	Tujuan Strategis	Indicator	Current Achievements	Risk Code	Key Risk Indicators (KRI)	Threshold	Key Control Indicators (KCI)	Threshold	Tindakan Manajemen
Financial	Revenue Growth	Revenue	21143	F1	Inflation Rate	6%	Join marketing dengan airlines	3 times per week	Implementation of risk treatment and Strategic
				F2	Number of Prospective Partners	8	Number of engagements with partners	3 times per week	Implementation of risk treatment and Strategic
	Increasing Operational Profitability	EBITDA	3,993	F3	Cost per Passenger Growth	7%	Implementation of efficiency programs	80%	Implementation of risk treatment and Strategic
	Maximizing Profit	Net Income	2,493	F4	Regional Tax Increase	12%	Frequency of company tax structure evaluations	2 times per quarter	Implementation of risk treatment
	Optimizing Return on Investment	(ROIC - WACC) x Invested Capital	315	F5	Difference in Actual Progress vs. Plan (%)	10%	Frequency of project progress monitoring	4 times per month	Implementation of risk treatment and Strategic
Customer	Improving global service standards	Skytrax Ranking of CGK Airport	2	C1	Number of complaints per service point	6	Frequency of service mystery audits	8 times per month	Strengthening internal control
	Optimizing Economic Value per Passenger	Customer Spending Per Pax CGK and DPS	108,8	C2	Percentage of tenants with sales below target	15%	Frequency of tenant performance evaluations	1 time per month	Implementation of risk treatment
	Improving service quality	Customer Satisfaction Index Score	4,3	C3	Facility Performance	75%	% of scheduled maintenance completed	85%	Implementation of risk treatment
	Accelerating Organizational	Strategic Priority Project Injournet Group	100	C4	% of units implementing transformation programs	65%	% of communication programs evaluated for	90%	Implementation of risk treatment
Internal Business Processes	Enhanced corporate reputation	Injournet Group Brand Strength Level	29	I1	Program realization compared to plan (monthly)	100%	Monitoring implementation progress	5 times per month	Strengthening internal control
	Increased passenger growth	Airport Passenger Traffic	152,95	F1	Inflation rate	6%	Joint marketing with airlines	3 times per week	Implementation of risk treatment and Strategic
	Strengthened governance and Enhanced collaborative work culture	ESG Rating	29	I2	% of strategic decisions containing ESG aspects	75%	Frequency of strategic decision evaluations with program monitoring	1 time per quarter	Implementation of risk treatment
	Digitally-driven operations	Realization of Intra-Injournet Group Synergy Technology Architecture Implementation	96%	I3	Level of strategic alignment between entities	80%	Frequency of synergy	3 times per quarter	Strengthening internal control
			100%	I5	Level of data conformity between systems	85%	Master data management implementation	85%	Strengthening internal control
Learning and Growth	Increased employee engagement	Cyber Security Maturity Implementation	100%	T1	% of employees who participated in cybersecurity	95%	Frequency of cybersecurity campaigns	3 times per quarter	Strengthening internal control
	Competency and leadership development	Human Capital Maturity Assessment	100%	T2	Assessment consistency level	75%	Frequency of socialization of the assessment process	2 times per quarter	Strengthening internal control

The yellow threshold indicates a potential risk that could potentially occur, allowing management to take early risk management action to avoid a red signal. The green threshold indicates that the risk is still under control and only requires strengthening of the company's controls. The color threshold in the target achievement indicates the deviation from the target during the monitoring period. If a deviation (not achieved) occurs, a yellow signal will be given, and if the deviation is higher, a red signal will be given. The established management actions will facilitate rapid decision-making and serve as a preventative measure in the event of a potential decline in company performance, both operational and financial.

The company's performance progress is demonstrated through Key Performance Indicators (KPIs) and their thresholds. Risk exposure affecting target achievement is demonstrated through Key Performance Indicators (KRIs) and their thresholds, and the effectiveness of internal control is demonstrated through Key Performance Indicators (KCIs). The integration of KPIs, KRIs, and KCIs provides a layered signal of the company's performance achievement. The information system-based RBPM model uses a strategic map that illustrates the causal relationships or influences of each strategic objective, which is then complemented by thresholds from Performance (P) indicators, Risk (R) indicators, and Control (C) indicators that provide signals when the threshold limits are reached. The dashboard framework can be illustrated in Image 4.

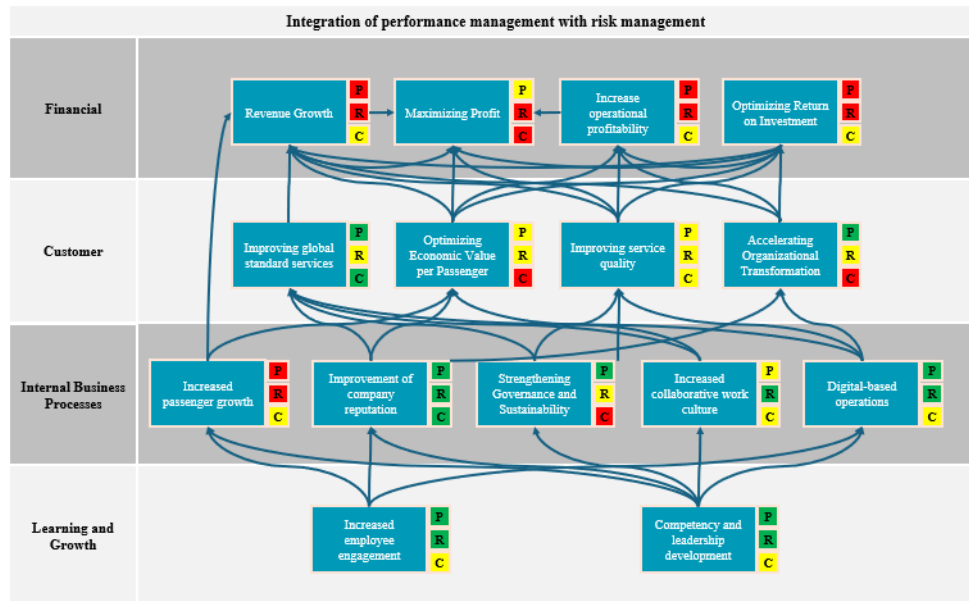


Image 4: BPM Dashboard

The RBPM dashboard can be integrated with other systems to serve as data sources for key indicators, as shown in Image 5.

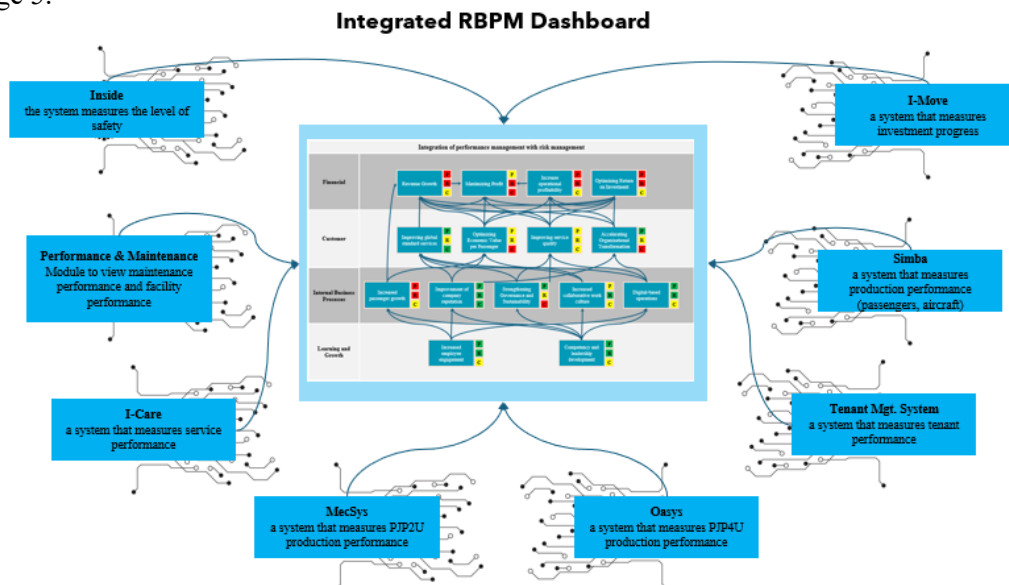


Image 5: Integrated RBPM Dashboard

The evaluation compared the current implementation of performance and risk management with performance and risk management integrated via the RBPM approach. The gap analysis revealed several aspects that need improvement to implement the RBPM model, which are compiled into several recommendations:

Table 5. The Gap and Recommendations for Improvement

Aspect	The gap	Recommendations for Improvement
Cascading and Alignment KPI	Risk cascading has not been carried out consistently in line with KPI cascading.	The development of cascading KPIs aligns with cascading risks, so that the associated risks follow the breakdown of KPIs from the corporate level to the unit level. The risk assessment process is not only bottom-up but also top-down, with strategic risks being reduced to operational risks.
KPI Value Determination	The determination of KPI values has not yet been structured to consider risk appetite, resulting in an acceptable, tolerable threshold for non-achievement.	The determination of KPI values is followed by the establishment of threshold values (red, yellow, or green) for deviation from KPI targets based on the risk appetite statement and risk threshold values established by the Board of Directors. These thresholds can be used as a basis for performance monitoring and evaluation.
Review and monitoring of performance and risk	1. Performance reviews have not been accompanied by in-depth risk analysis, limited to target versus actual analysis. 2. Risk reviews have not been conducted in-depth and in real time due to the lack of an adequate information system.	Monitoring and review of performance achievements focus not only on performance analysis but also on in-depth risk analysis, examining not only target deviations but also the effectiveness of risk management and work programs. Monitoring and review are supported by an integrated system that combines performance assessment and risk management, enabling real-time data collection to facilitate decision-making and identify alternative strategies to improve company performance.
Integration of performance and risk management	The implementation of performance management has not been fully integrated with risk management; both are still siloed (separate).	Implementing RBPM to strengthen the integration process of performance management with risk management, where the determination of KPIs is directly linked to KRIs as early warnings and KCIs as indicators of the effectiveness of control implementation.
Information systems and technology	Performance management does not yet have an information system, so the performance management and risk management systems have not yet been implemented in an integrated manner.	Development of the Enterprise Risk Management Information System (Sierina) to integrate risk management with performance achievement monitoring, the initial step taken was to add an Early Warning System dashboard by optimizing KRI and KCI.
Risk Appetite and Tolerance	Risk appetite has not been directly integrated into performance targets, so it has not been fully supported in decision-making.	Using risk appetite statements and risk threshold values as the basis for determining the threshold for deviation from achieving targets/goals and communicating them down to the operational level.
Key Risk Indicator	KRI has not been used as an indicator that provides early warning signals, and has not been integrated with KPI	KRIs are integrated into each KPI indicator to provide warning signals of potential risks that could impact KPI achievement. Implementing RBPM will simplify the integration or alignment process between KPIs and KRIs.
Risk Communication and Reporting	Risk communication remains limited because it lacks an integrated system for delivering information in real time.	Conducting risk communication with greater frequency to keep pace with the dynamic level of change in the business environment by optimizing an integrated system between performance management and risk management.

It can be concluded that implementing RBPM can directly integrate KPIs with KRI and KCI; in addition, it helps align KPI determination with risk appetite, thereby setting the threshold for the non-achievement of performance targets. The RBPM model can also help develop an ERM information system dashboard as an integrated system, where other systems serve as data sources for KRI and KCI indicator values, thereby helping companies develop an Early Warning System and real-time data processing to support decision-making. Based on the results of this research, the company should implement the Risk-Based Performance Management model. In implementing RBPM, companies must pay attention to and improve risk culture or understanding regarding risk and performance, as well as make improvements in terms of performance management and risk management, as the foundation of RBPM.

CONCLUSION

Based on the results of research regarding the application of Risk-Based Performance Management as an approach to improving company performance at PT XYZ, several things can be concluded as follows:

1. There is a significant gap between the implementation of performance management and risk management, resulting in suboptimal achievement and limited sustainable performance improvement. In general, the gaps are as follows:
 - a) Performance and risk management are carried out partially (separately), with the KPI primarily used as a success metric. In contrast, risk in this case has not been integrated in the determination, monitoring, and evaluation of performance.
 - b) Risk appetite has not been internalized across all levels of the organization, so target setting does not consistently account for it.
 - c) Performance indicators (KPIs), risk indicators (KRIs), and control indicators (KCIs) are not yet connected in a single integrated system or dashboard, so decision-making tends to be reactive because an early warning system is not yet available.
2. The implementation of the RBPM model is considered a solution at PT XYZ, with the basic concept of integrating company strategy and performance with risk management in a single framework where risk appetite serves as a reference or glue between the two. The RBPM model can also improve the quality of risk-based decision-making and encourage the achievement of more stable, measurable, planned, and sustainable performance, as well as efficient operations, by enabling the company to be more adaptive and resilient to environmental changes and uncertainties that hinder its goals or performance.

SUGGESTION

Based on the research results and conclusions that have been presented, the following suggestions can be given to support companies in implementing the RBPM model as an approach to improving company performance, namely:

1. Integrating performance management and risk management in one integrated framework that connects KPI, KRI, and KCI in one system or dashboard that supports real-time decision making.
2. Management needs to evaluate and establish a clear risk appetite at every level of the organization, link it to performance targets, and systematically socialize it so it can be used as a reference in making strategic and operational decisions.
3. Strengthening HR capabilities related to performance management and risk management through training programs that integrate performance and risk management.
4. Strengthening the governance of integrated performance management and risk management, especially in connected coordination channels.
5. Strengthening technology and data infrastructure to support RBPM implementation by developing an information system that is integrated with other systems. This information system integration is key to increasing the effectiveness of RBPM implementation.

REFERENCES

- Aguinis, H. (2019). *Performance management* (4th ed.). Chicago Business Press.
- Armstrong, M., & Baron, A. (2004). *Managing performance: Performance management in action*. Chartered Institute of Personnel and Development.
- Behl, A., & Dang, G. (2022). Enterprise risk management and firm performance: A systematic literature review. *Journal of Risk and Financial Management*, 15(6), 245.

- Committee of Sponsoring Organizations of the Treadway Commission. (2017). Enterprise risk management: Integrating with strategy and performance. COSO.
- Djohanputro, B. (2023). Risk-based performance management: Konsep dan implementasi. PPM Manajemen.
- Doran, G. T. (1981). There's a S.M.A.R.T. way to write management's goals and objectives. *Management Review*, 70(11), 35–36.
- Fatima, A., Ullah, K., Thaheem, M. J., & Nasir, A. R. (2024). Risk-based integrated performance assessment framework for public-private partnership infrastructure projects. *Organization, Technology and Management in Construction: An International Journal*, 16(1), 3265–3281.
- Hadiyanto, H. (2015). Proposed risk-based performance management system (RBPMS): Integrating strategy, risk, and performance—A case study of Indonesian manufacturing company. *International Journal of Business and Management*, 10(2), 45–56.
- Institute of Risk Management. (2011). Risk appetite and tolerance. IRM.
- International Organization for Standardization. (2018). ISO 31000:2018 Risk Management—Guidelines. ISO.
- Kaplan, R. S., & Norton, D. P. (2001). The strategy-focused organization: How balanced scorecard companies thrive in the new business environment. Harvard Business School Press.
- Kaplan, R. S., & Norton, D. P. (2004). Strategy maps: Converting intangible assets into tangible outcomes. Harvard Business School Press.
- Kementerian Badan Usaha Milik Negara Republik Indonesia. (2023). Keputusan Deputy Bidang Keuangan dan Manajemen Risiko Nomor: SK-8/DKU.MBU/12/2023. Kementerian Badan Usaha Milik Negara Republik Indonesia.
- Leone, A. J., Minutti-Meza, M., & Wasley, C. E. (2017). Influential observations and inference in accounting research. *The Accounting Review*, 92(6), 153–180.
- Marr, B. (2012). Key performance indicators: The 75 measures every manager needs to know. Pearson Education Limited.
- Mestchian, P., & Cokins, G. (2010). Risk-based performance management: Making it work. SAS Institute Inc.
- Pierce, E. M., & Goldstein, J. (2018). ERM and strategic planning: A change in paradigm. *International Journal of Disclosure and Governance*, 15(1), 51–59.
- Xu, Y., Yeh, C.-H., Yang, S., & Gupta, B. (2019). Risk-based performance evaluation of improvement strategies for sustainable e-waste management. *Resources, Conservation and Recycling*, 155, 104664.