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An Evaluation of Risk Culture at a Regional Owned Enterprise in South Kalimantan: A Case Study of PT. Air Minum ABC

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Abstract: Mayor Regulation of ABC Number 93 of 2019 emphasizes the obligation to implement risk management within the Government of XYZ City, including regional owned enterprises such as PT. Air Minum ABC. The purpose of this study is to evaluate the implementation of risk culture at PT. Air Minum ABC (Perseroda) using the 2012 framework developed by The Institute of Risk Management (IRM), through a combined approach of risk personality (Risk Type Compass), individual ethics (Moral DNA), and organizational perspective (Risk Culture Aspect Model). Primary data were collected through a survey involving 94 employees and in-depth interviews with the heads of risk management and internal audit, supported by secondary data obtained from internal documents of PT. Air Minum ABC. This study shows that PT. Air Minum ABC (Perseroda) has established a relatively strong foundation of risk culture based on the IRM 2012 framework, with an organizational score of 62 points, indicating a medium level of maturity. The Risk Type Compass (RTC) analysis reveals a dominance of Deliberate, Prudent, and Wary risk types among the majority of employees, while the Moral DNA results indicate strong ethical values in the dimensions of obedience, reason, and care, particularly among managerial staff and employees in the mature age group. The Internal Audit Division stands out in both personality and ethical aspects. At the organizational level, the aspects of Tone at the Top and Informed Risk Decision received the highest scores, whereas Accountability, Risk Resources, and Rewarding Appropriate Risk Taking still require strengthening. These findings underscore that building a strong risk culture depends not only on systems, but also on individual personality profiles and ethical values that shape collective behavior across all levels of the organization.

Keyword: Risk Culture, Risk Management, The Insitute of Risk Management

INTRODUCTION

Risk culture is a fundamental foundation in creating effective risk management and improving overall organizational performance. According to Saunders (2016), the implementation of an integrated risk culture enables organizations to proactively identify potential risks, analyze the possible consequences, and design appropriate mitigation measures. This allows organizations to manage uncertainty more effectively while reducing the likelihood of crises that could threaten operational stability and organizational reputation.

In regional owned enterprises, the implementation of risk management is regulated under Law Number 23 of 2014 concerning Regional Government, which affirms the importance of effective risk management to support the establishment of good, accountable, and sustainable corporate governance. The implementation of structured risk management not only aims to mitigate potential risks but also serves as a main pillar in improving the quality of public services, especially in sectors that directly relate to the basic needs of society, such as clean water supply. In this regard, Regional Drinking Water Companies (PDAM) hold a strategic role as providers of quality clean water services and contribute significantly to public health, environmental quality, and local economic development.

PDAMs in the Kalimantan region face significant challenges, including infrastructure limitations, geographical constraints, and suboptimal risk management (Ministry of Public Works and Housing, 2023). One PDAM in Kalimantan that requires attention is PT. Air Minum ABC, which operates in the city of XYZ, South Kalimantan, and has the largest service coverage in Kalimantan by serving more than 199,000 household connections by 2023 (PT. Air Minum ABC, 2023). As the main provider of clean water services, PT. Air Minum ABC bears great responsibility in ensuring the sustainability of quality services for the local community. Geographical and infrastructural challenges in South Kalimantan add complexity to the risks faced by the company, making the implementation of integrated risk management an urgent necessity.

Mayor Regulation of ABC Number 93 of 2019 emphasizes the obligation to implement risk management within the Government of XYZ City, including regional owned enterprises such as PT. Air Minum ABC. This regulation, particularly Article 1 paragraph (10), defines risk management as a systematic approach that includes culture, processes, and structures in risk related decision making. The implementation of an integrated risk culture is crucial, considering the significant impacts that can arise from the failure of risk management on the company's performance and sustainability. Past cases of fund misappropriation that occurred in South Kalimantan, such as the loss of IDR 4.7 billion at PDAM DEF in 2017 and serious violations involving the former President Director of PDAM KLM in 2018, reflect weak supervision systems and low compliance with risk governance in public organizations. These experiences emphasize the importance of strengthening risk culture in public organizations to prevent disruption to operations and the quality of public services (Salamah & Wijanarko, 2020).

This context shows the importance of conducting an evaluation analysis of the risk culture at PT. Air Minum ABC to understand the extent to which risk culture has been implemented and how risk management can be improved to support the sustainability of the company's operations. Several previous studies are relevant to this research, one of which is by Wilna (2016) entitled "Risk Culture at Senior and Middle Management Level: A Telecommunications Case Study," which showed that both management levels had a high maturity of risk culture, reflecting an understanding of the importance of risk management in achieving organizational goals. In the banking sector, research by Cavaleros (2019) recommended improving transparency in risk reporting, particularly to demonstrate compliance with FSB principles and to support risk culture assessments by external stakeholders.

Based on the description above, this study aims to evaluate the risk culture at PT. Air Minum ABC using the 2012 framework from The Institute of Risk Management (IRM). This framework was chosen due to its comprehensive scope, covering both organizational and individual perspectives. By using this framework, the study is expected to provide a broader perspective in analyzing the risk culture within the organization. At the individual level, the assessment will use the Risk Type Compass (RTC) model, focusing on individual preferences toward risk, providing an overview of personal risk types that may influence decision making

behavior, and the Moral DNA model, which evaluates individual ethical values such as obedience, logic, and care, which are essential foundations in forming a strong risk culture within the organization. At the organizational level, the Risk Culture Aspect (RCA) Model offers a comprehensive framework for evaluating the key elements of risk culture, such as tone at the top and risk integration mechanisms within the organization.

In contrast to previous studies that generally focused on financial companies in urban areas, this research will explore PT. Air Minum ABC as a regional owned enterprise with the largest operational scale in Kalimantan. The geographical location of the company, which is dominated by swamp areas, creates significant risk complexity, thus requiring a more integrated implementation of risk management. Moreover, the frequent cases of fund misuse and weaknesses in internal control systems in various regional owned enterprises indicate the need to strengthen risk culture to minimize the potential for similar incidents. Therefore, this study aims to evaluate the implementation of risk management with a focus on risk culture, provide recommendations for strengthening risk culture at PT. Air Minum ABC, and offer new perspectives on the application of risk culture in regional owned enterprises outside of Java Island.

METHOD

This study employs a qualitative descriptive method. The research is focused on a specific object through a case study, with the aim of providing evaluation and recommendations for development and improvement. According to Creswell (2014), qualitative research is an approach that aims to explore and understand the meaning that individuals or groups ascribe to a social or human problem. In this context, the case study approach, as described by Yin (2014), allows researchers to conduct in-depth exploration of a particular phenomenon within a real life context by utilizing various sources of data, such as interviews, observations, and documents. This study is guided by questions related to aspects such as the Risk Type Compass, Moral DNA, and the Risk Culture Aspects Model.

The data sources used in this study consist of both primary and secondary data. Primary data were obtained through surveys involving 94 respondents from a total population of 370 employees at PT. Air Minum ABC, resulting in a participation rate of 25.4%. In addition, in-depth interviews were conducted with three key informants: one in the position of Head of the Risk Management Task Force, and two in the Internal Audit Performance Unit. Secondary data were obtained from available documents, including the company's risk management guidelines, annual reports, risk management policy decrees, and internal corporate regulations.

The data processing techniques employed two approaches: descriptive statistics for the survey data, and narrative analysis for the interview data. Survey data were processed using Microsoft Excel with the aid of Pivot Tables and visualized in tabular form to facilitate interpretation of aspects such as the Risk Type Compass, Moral DNA, and the Risk Culture Aspects Model. Meanwhile, interview data were analyzed narratively to extract deeper meanings from participant narratives, which were then compared to the IRM Risk Culture Framework, covering both individual and organizational levels (Azwar, 2018).

RESULT AND DISCUSSION

Individual Risk Perception

The assessment of individual risk perception was conducted using two approaches: the Risk Type Compass (RTC) and Moral DNA, each of which explores behavioral tendencies toward risk and the personal ethical values that influence decision making. The RTC is used to identify how an individual tends to respond to uncertainty or risk, based on personality preferences and decision making styles, categorized into eight primary risk types:

Wary (W), Prudent (P), Intense (I), Deliberate (D), Spontaneous (S), Carefree (Ca), Composed (Co), and Adventurous (A). The following table presents the average score results of the eight risk types based on the Risk Type Compass model:

Table 1. Risk Type Compass Individual, Managerial & Non-Managerial

Risk Type Compass	W	P	I	D	S	Co	Ca	A
Individuals	3,31	3,37	2,98	3,91	3,13	3,26	3,17	3,20
Managerial	4,03	4,16	3,97	4,38	3,63	4,06	3,78	3,91
Non-Managerial	3,16	3,21	2,77	3,81	3,03	3,09	3,05	3,05

Source: Processed by Researcher

Based on the individual RTC analysis, the highest average score was Deliberate (3.91), followed by Prudent (3.37) and Wary (3.31). This indicates that most respondents tend to be cautious, analytical in their thinking, and consider various possibilities before making decisions. These findings suggest that the individual risk profiles of employees at PT. Air Minum ABC tend to be conservative, calculated, and analysis based. However, there is still variation in decision making styles, reflecting organizational dynamics that can be leveraged to form complementary work teams in the context of risk management.

From the RTC analysis based on managerial roles, the highest risk type score was Deliberate (4.38), indicating that the majority of managerial respondents demonstrate a highly planned, analytical, and well considered decision making style. High scores were also observed in the Prudent (4.16), Wary (4.03), and Composed (4.06) types, which suggests that the management of PT. Air Minum ABC tends to adopt a conservative yet rational approach to risk, with strengths rooted in calmness, caution, and systematic thinking.

In the RTC analysis for non-managerial staff, the highest score was also Deliberate (3.81), indicating that most non-managerial employees similarly tend to be cautious and measured when facing risk, although not as strongly as the managerial group. The Prudent (3.21) and Wary (3.16) types also showed relatively high values, suggesting a preference for stability and adherence to procedures among operational staff.

In a comparative context, the managerial group recorded higher scores across almost all risk types, particularly in Deliberate, Prudent, and Composed. A notable difference was observed in the Composed score, which shows that while non-managerial staff are still able to maintain composure, it is not as pronounced as in the managerial group, which scored higher on this dimension. These findings illustrate that managerial employees are generally responsible for strategic decision making, thus requiring analytical and controlled risk profiles. Meanwhile, the more moderate tendencies in the non-managerial group highlight the need to enhance their understanding of risk and provide additional training, so that operational level decisions reflect the same level of prudence aligned with the organization's strategic direction.

To gain a deeper understanding of individual characteristics in risk based decision making, the RTC analysis was not only conducted in aggregate but also extended based on division within the organization. This approach aims to identify distinct risk tendencies in each work unit, recognizing that the roles, responsibilities, and operational environments of each division can shape different perceptions and responses to risk. The following table presents RTC results by division:

Table 2. Risk Type Compass by Division

Risk Type Compass	W	P	I	D	S	Co	Ca	A
Asset, IT, and Implementation Division	3,24	3,32	2,90	3,87	3,13	3,21	3,17	3,16
Finance and Marketing Division	3,43	3,51	3,08	3,99	3,24	3,36	3,28	3,30
Production and Distribution Division	3,31	3,37	2,98	3,91	3,13	3,26	3,17	3,10

HR and Procurement Division	3,46	3,53	3,01	4,01	3,22	3,33	3,25	3,30
Corporate Secretary Division	3,26	3,33	2,90	3,87	3,14	3,20	3,16	3,18
Internal Audit Division	3,82	3,86	3,23	4,21	3,48	3,65	3,55	3,54

Source: Processed by Researcher

The Asset, IT, and Operational Divisions demonstrated the highest risk tendency in the Deliberate type (3.87), followed by Prudent (3.32) and Wary (3.24). This indicates that employees in these divisions tend to adopt systematic, cautious, and analytically driven decision making approaches, which align with the technical and strategic functions they carry out. Meanwhile, the lowest score was observed in the Intense type (2.90), suggesting a relatively low level of anxiety and sensitivity to risk. Overall, this division exhibits a rational and structured risk profile that corresponds well with the demands of infrastructure management, technology oversight, and daily technical operations that require high levels of precision and caution.

The Finance and Marketing Divisions revealed a highly dominant risk profile in the Deliberate type (3.99), followed by Prudent (3.51) and Wary (3.43), reflecting strong caution and heightened awareness of potential risks, both in terms of financial management and market dynamics. Meanwhile, the lowest score in Intense (3.08) suggests that emotional pressure or anxiety in dealing with risk is not a primary tendency among employees in these divisions. This profile reflects a balance between structure and flexibility, where logical and systematic approaches are complemented by adaptability to external dynamics, making the Finance and Marketing Divisions resilient units in managing both strategic and operational risks effectively.

The Production and Distribution Divisions showed the highest tendency in the Deliberate type (3.91), followed by Prudent (3.37) and Wary (3.31). This pattern indicates that employees in these divisions tend to make decisions cautiously, logically, and based on structured considerations in accordance with the nature of their work, which involves technical processes, quality control, and the continuity of clean water services. Meanwhile, the Intense type scored the lowest (2.98), suggesting that employees in these divisions are relatively unaffected by anxiety or emotional responses when dealing with risk. This profile reinforces that the Production and Distribution Divisions adopt a logical and stable risk approach, aligned with their role in ensuring the reliability of the water production and distribution systems.

The Human Resources and Procurement Divisions showed the highest risk tendency in the Deliberate type (4.01), followed by Prudent (3.53) and Wary (3.46). This reflects that employees in these divisions tend to make decisions that are highly cautious, well considered, and analytical. Such an approach is highly relevant to recruitment, personnel management, and procurement processes that require strict adherence to procedures and regulations. The lowest score was observed in Intense (3.07), indicating that anxiety or emotional responses to risk are not dominant characteristics in this division.

The Corporate Secretary Division showed the highest risk tendency in the Deliberate type (3.87), indicating that employees in this division have a strong tendency to make planned, systematic, and logically based decisions. High scores in Prudent (3.33) and Wary (3.26) further indicate a high level of caution and risk sensitivity, which aligns with the role of the Corporate Secretary in maintaining formal communication, regulatory compliance, and corporate governance. Meanwhile, the Intense score (2.90) was the lowest, suggesting that employees in this division tend to be emotionally stable and are not easily affected by pressure or excessive concern.

The Internal Audit Division (SPI) displayed a very strong risk profile in the Deliberate type (4.21), followed by Prudent (3.86) and Wary (3.82). This shows that employees in SPI place high value on analytical, thoughtful, and cautious approaches to risk,

which aligns closely with their roles in internal control, risk oversight, and ensuring compliance with internal and external regulations. High scores were also found in Composed (3.65), Carefree (3.55), and Adventurous (3.54), suggesting that they are not only systematic but also sufficiently confident and willing to explore new approaches in carrying out audit and oversight functions. The Intense score (3.23), although the lowest within the division, is still relatively high compared to other divisions, indicating that SPI employees possess a reasonable level of emotional alertness when responding to uncertainty or potential irregularities.

Based on the divisional RTC analysis, there is a fairly consistent pattern of tendencies, while also revealing important variations that reflect the specific functions of each division within the organization. In general, all divisions scored highest in the Deliberate type, with values ranging from 3.87 to 4.21. This confirms that the majority of employees across all units tend to make decisions that are cautious, structured, and analysis based. The Prudent and Wary types also consistently rank high in almost all divisions, indicating a broadly shared culture of caution and risk sensitivity within PT. Air Minum ABC.

Significant differences were observed in the dimensions of flexibility and adaptability, represented by the Spontaneous, Carefree, and Adventurous types. The Internal Audit Division, for example, recorded relatively high scores in all three (each above 3.48), suggesting a balance between strict oversight and the ability to adapt to organizational dynamics. In contrast, the Corporate Secretary and Asset-IT Divisions demonstrated more conservative tendencies in these dimensions, which is consistent with their administrative and technical responsibilities that require high levels of consistency and procedural compliance.

These overall results indicate that the organization has a solid foundation of risk culture, characterized by a dominant approach that is cautious, structured, and rational in decision making. The variations among divisions reflect a good level of adaptation to the nature of their respective tasks—where oversight functions demand a combination of rigor and flexibility, while operational functions emphasize control and stability. These differences can be leveraged to form cross functional teams that complement one another by combining individuals with diverse risk types. For example, combining Deliberate and Composed types from technical functions with Adventurous and Spontaneous types from more dynamic units. Moreover, these findings can serve as a basis for designing division-specific risk management training programs, ensuring that each unit is equipped to manage risks in alignment with its respective challenges and operational characteristics.

The next analysis focuses on individual values measured through the Moral DNA instrument, which is used to map key moral values categorized into three dimensions of ethical awareness: obedience, reason, and care. These three dimensions represent the moral foundations that shape one's thinking and behavior in decision making, particularly in the context of risk management. The Moral DNA results are analyzed by considering respondents' demographic characteristics, such as gender, age, length of service, and organizational position.

Table 3. Results of DNA Moral Analysis

Criteria		Compliance	Logic	Care
Gender	Male	3,90	3,86	3,89
	Female	3,87	3,84	3,88
Age	21-30	3,82	3,79	3,85
	31-40	3,87	3,84	3,87
	41-50	3,92	3,91	3,94
	51-60	3,89	3,87	3,89
	<1 year	3,73	3,68	3,73

Service	1-5 years	3,82	3,82	3,87
	5-10 years	3,89	3,87	3,95
	>10 years	3,90	3,87	3,89
Position	Managerial	4,16	4,12	3,97
	Non-Managerial	3,84	3,80	3,87
Division	Assets, IT and Implementation	3,86	3,81	3,88
	Finance and Marketing	3,88	3,88	3,90
	Production and Distribution	3,90	3,85	3,90
	HR and Procurement Corporate Secretary	3,90	3,88	3,90
	Internal Supervisory Unit	3,85	3,80	3,87

Source: Processed by Researcher

The Moral DNA analysis based on gender revealed only minimal differences in ethical scores between male and female respondents across the three core dimensions: obedience, reason, and care. In the obedience dimension, both groups demonstrated nearly equal levels of commitment to rules, norms, and organizational policies. In the reason dimension, both genders tended to apply a rational approach in objectively evaluating ethical dilemmas and risks. The care dimension indicated that empathy, concern for the impact of decisions on others, and social responsibility were integral components of ethical orientation for both men and women.

In addition, the analysis based on age revealed a consistent trend in which older respondents achieved higher scores across all three core dimensions. This suggests that rational consideration and logic based decision making are more dominant among older age groups, likely due to their increased exposure to complex organizational situations and ethical dilemmas over time.

Meanwhile, the Moral DNA analysis based on length of service showed an upward trend in ethical scores across the three dimensions as tenure increased. However, an interesting phenomenon was observed among employees with 5–10 years of experience, who consistently achieved the highest scores across all three dimensions—exceeding even those with over 10 years of service. This indicates that adherence to organizational rules and procedures tends to increase during the adaptation and structural learning phase, with peak levels of loyalty and regulatory engagement occurring during mid-career stages.

The analysis based on organizational position revealed a notable distinction between managerial and non-managerial employees in all three ethical dimensions. The Moral DNA results showed that managerial staff not only scored higher in obedience but also demonstrated a relatively balanced integration of logical reasoning and empathetic values. Therefore, the development of ethical and risk culture within the organization can be focused on value based training that maintains high standards within the managerial group while also reinforcing the dimensions of obedience and rationality among non-managerial employees. This approach aims to foster ethical cohesion across hierarchical levels in a consistent and sustainable manner.

The Moral DNA analysis by division overall showed that the Internal Audit Division consistently recorded the highest scores across all dimensions, reflecting high levels of integrity, rationality, and social care—traits that are ideal for internal oversight functions. Other divisions also demonstrated strong ethical commitment, with variations that can serve as a foundation for developing more contextualized ethics and risk culture training programs tailored to the specific functions of each unit. Strengthening logical reasoning in administrative divisions, alongside reinforcing empathy and procedural compliance in technical divisions, could be a strategic step to ensure a uniformly strong and sustainable organizational ethical culture.

Organizational Level Risk Perception: Risk Culture Aspect Model

The analysis of organizational level risk perception refers to the Risk Culture Aspect Model (RCAM), which encompasses four key themes of risk culture: tone at the top, governance, competency, and decision making. The purpose of this approach is to capture and illustrate how risk management values and practices have been collectively integrated into the organization's work systems. The analysis of the RCAM is based on both survey data and interview excerpts to provide a comprehensive picture of each theme under examination. The following presents the results of the survey related to the RCAM:

Table 4. Risk Culture Aspect Survey Results

Theme	Aspect	Average Score
Tone at The Top	Risk Leadership	3,67
	Responding to Bad News	3,64
Governance	Accountability	3,32
	Risk Transparency	3,52
Competency	Risk Resources	3,38
	Risk Competency	3,52
Decision Making	Informed Risk Decision	3,62
	Rewarding Appropriate Risk Taking	3,55

Source: processed by researchers

In the Tone at the Top theme, the Risk Leadership aspect recorded an average score of 3.67, indicating that the majority of respondents have a positive perception of the organization's leadership in shaping a risk awareness culture. The Responding to Bad News aspect scored slightly lower, at an average of 3.64, yet still reflects a generally positive perception. Overall, the quantitative analysis suggests that leadership is perceived as committed to building a risk culture, especially in terms of encouraging the integration of risk into strategic policies and public service delivery.

From the open-ended question analysis under the Tone at the Top theme, based on 376 responses, most participants described leadership at PT. Air Minum ABC as generally open and responsive to risk reporting. Many respondents mentioned that leaders respond quickly to reports, provide direction, and follow up through coordination meetings or direct technical assignments. This reflects a genuine commitment from leadership to support operational risk management implementation. However, some responses also noted the absence of consistent feedback on submitted reports, making it unclear whether the reported risks were actually followed up or not.

Interview findings on the Tone at the Top theme show that PT. Air Minum ABC has made efforts to instill a structured risk culture through various formal forums such as management review meetings (RTM) and annual agendas like Risk Awareness Week. Furthermore, all units are required to develop a Risk Register as part of their Annual Work Plan (RKT), which is reviewed quarterly. Nevertheless, interviews also revealed challenges in cultivating an open reporting culture, particularly on non-technical issues such as fraud risks or administrative violations. Therefore, the organization still needs to expand risk literacy across all employee levels and strengthen cross functional communication to ensure that openness to risk becomes part of day to day work practices.

In the Governance theme, the RCA analysis focuses on building effective risk governance through two main aspects: Accountability and Risk Transparency. The Accountability aspect recorded an average score of 3.32, indicating that most employees understand the relationship between risks and the performance of their respective work units. However, data also revealed that some employees feel that risk evaluations are not routinely or comprehensively conducted by the internal compliance unit. In the Risk Transparency

aspect, the analysis showed an average score of 3.64, reflecting leadership's commitment to ensuring that risk data is regularly updated and aligned with each unit's operational dynamics.

Open-ended responses under the Governance theme generally indicated that mechanisms for communicating risk information are already in place systemically, but still require improvements in terms of accessibility, understanding, and broad employee engagement. The organization must ensure that all units and job levels have a shared understanding of risk through regular training, simplified reporting language, and interactive forums that enable open discussion. Strengthening this aspect will foster transparency, accelerate responses to risk, and reinforce the integration of risk management into organizational decision making processes.

Interview results related to Governance show that most employees understand their roles and responsibilities in managing risk and believe that their units have clear procedures for responding to risk. Regarding Accountability, the Head of the Risk Task Force and the Head of Internal Audit (SPI) confirmed that the structure has been formally regulated in a board directive outlining the risk task force structure. In terms of Risk Transparency, the company has developed various risk communication channels including a Quarterly Risk Bulletin, email, internal WhatsApp groups, and face to face forums such as the Unit Coordination Forum. However, challenges remain in implementation, especially the need to improve digital literacy among operational staff so that risk information systems can be more effectively utilized.

In the Competency theme, the RCA analysis aims to evaluate whether the organization has adequate human resources to effectively support risk management. This theme includes the aspects of Risk Resources and Risk Competency. The RCA analysis for Risk Resources showed that respondents acknowledged that risk management personnel have demonstrated technical competence and are trusted in handling risk issues within their respective units. However, there were indications that the educational capabilities of risk personnel are not evenly felt across operational staff. For Risk Competency, respondents indicated that most employees had participated in risk management training and socialization, although not all employees had been reached. Moreover, RCA results revealed that the training materials were not always practical or tailored to contextual needs.

Findings from open-ended questions under the Competency theme generally show that the technical and coordination capabilities of the risk management team are rated positively, although more direct engagement at the operational level is needed. Regarding Risk Resources, most employees believe the organization has provided adequate structural and systemic support for risk management implementation, including the risk team, information system tools, and evaluation mechanisms. For Risk Competency, respondents indicated that most of them had received risk management training and found it relevant to their roles.

In the Decision Making theme, the RCA analysis includes two aspects: Informed Risk Decision Making and Rewarding Appropriate Risk Taking. The Informed Risk Decision Making aspect scored an average of 3.62, reflecting that most employees feel involved in decision making and that the integration of risk analysis into operational decisions is reasonably strong. However, some findings indicated that long term risk considerations are not yet common practice across all units. The Rewarding Appropriate Risk Taking aspect scored an average of 3.64, also reflecting a positive result, although there is evidence that recognition for successful risk management has not yet become a consistent part of organizational culture.

From the open-ended responses under the Decision Making theme, most respondents stated that leaders in their units already request risk analysis before approving new initiatives,

and there is a policy requiring the inclusion of a risk assessment form in proposal submissions. However, the data also shows that the application of risk based decision making is not yet consistent across all units. Many respondents stated that for smaller or operational decisions, risk is often overlooked or discussed informally, with some relying more on leaders' intuition than on documented analysis.

Interview results under the Decision Making theme aligned with the RCA analysis, showing that some employees believe that risk is now being considered in key decision making processes. However, there are indications that the involvement of the risk function is not yet fully structured or uniformly applied across all units. The Head of the Risk Task Force and the Head of SPI confirmed the implementation of procedures requiring the inclusion of risk analysis in every strategic proposal. However, some work units still perceive risk analysis as an administrative obligation rather than a strategic decision-making tool. Therefore, the company is currently promoting the internalization of risk management as part of a data and projection based planning and decision making process, not merely as a document formalization requirement.

Evaluation

Following the analysis of risk perception at both the individual and organizational levels through surveys and interviews, evaluation becomes the next critical phase. The purpose of this evaluation is to map the organization's current position within the spectrum of risk culture maturity, as well as to identify aspects that are functioning effectively and those that still require strengthening. The assessment is conducted through a risk culture mapping approach, using an evaluation matrix based on scores and the classification of levels for each aspect. The evaluation is based on the eight aspects of the Risk Culture Aspect Model (IRM, 2012).

Table 5. Risk Culture Score of PT. Air Minum ABC

Theme	Aspect	Weight	Point	Level	Total
<i>Tone at The Top</i>	<i>Risk Leadership</i>	2	8	Green	16
	<i>Responding to Bad News</i>	1	7	Green	7
<i>Governance</i>	<i>Accountability</i>	1	4	Yellow	4
	<i>Risk Transparency</i>	1	6	Green	6
<i>Competency</i>	<i>Risk Resources</i>	1	4	Yellow	4
	<i>Risk Competency</i>	1	6	Green	6
<i>Decision Making</i>	<i>Informed Risk Decision</i>	2	7	Green	14
	<i>Rewarding Appropriate Risk Taking</i>	1	5	Yellow	5
Total					62

Source: Processed by researchers

The evaluation results show that under the Tone at the Top theme, which includes the aspects of Risk Leadership and Responding to Bad News, PT. Air Minum ABC scored 8 (Green category) for Risk Leadership and 7 (Green category) for Responding to Bad News. According to the RCA Scorecard, these achievements indicate that the direction of risk leadership has been clearly and consistently communicated by management, along with efforts to encourage open reporting of risk information. However, although the practice of reporting "bad news" has begun to be normalized, the follow up system still needs to be more formalized and integrated into the company's overall risk management mechanisms to ensure a more structured and documented process.

In the Governance theme, which includes the aspects of Accountability and Risk Transparency, the organization scored 4 (Yellow) and 6 (Green), respectively. This suggests that while responsibilities for risk management have been defined and are available within a formal structure, understanding and implementation remain uneven across all work units. For

Risk Transparency, risk information has begun to be actively utilized in the decision-making process. However, the distribution of information and involvement of operational staff still need to be improved in order to reach full effectiveness.

Meanwhile, under the Competency theme, which includes Risk Resources and Risk Competency, the scores were 4 (Yellow) and 6 (Green), respectively. Based on the scorecard, the organization has established relevant risk functions and personnel. However, the distribution of authority and the coverage of risk training have not yet reached all levels. Risk management competency tends to be concentrated at certain levels. There remains a need for further training and development programs that encompass all elements of the organization to ensure deeper internalization of risk culture.

In the Decision Making theme, the aspect of Informed Risk Decision received a score of 7 (Green), while Rewarding Appropriate Risk Taking received a score of 5 (Yellow). This indicates that risks are now explicitly considered in decision making processes, especially in strategic projects. Management has encouraged the use of risk information as a basis for policy formulation. However, the reward system for appropriate risk taking has not yet been fully structured. Recognition of risk awareness behavior has not been explicitly linked to performance management systems. As a result, it has not consistently driven behavioral change across all units.

With a total score of 62, the risk culture at PT. Air Minum ABC is positioned at a moderate to maturing level according to the IRM RCA Scorecard framework. The highest achievements were recorded in the areas of risk leadership and risk informed decision making processes. However, several aspects including accountability, competency, and systems for rewarding risk awareness behavior still require further strengthening.

CONCLUSION

Based on the results and discussion, the study indicates that the company has established a relatively strong foundation of risk culture, as evidenced by the integration of values such as prudence, accountability, and risk based decision making. At the individual level, the analysis using the Risk Type Compass (RTC) shows that the majority of employees exhibit tendencies toward the Deliberate, Prudent, and Wary risk types, reflecting a cautious, analytical, and structured decision making style. The highest scores were recorded among the managerial group and the Internal Audit Division, indicating a high level of readiness to manage uncertainty at the strategic level. However, more flexible risk types such as Adventurous and Spontaneous remain relatively low, indicating the need to enhance adaptive capacity in several operational units.

From the perspective of individual ethical values, the Moral DNA results show that the three core dimensions, namely obedience, reason, and care, are consistently embedded across demographic groups. Employees aged 41 to 50, those with 5 to 10 years of service, and those in managerial positions recorded the highest scores. This reflects that age maturity and work experience correlate positively with ethical quality in risk based decision making. The Internal Audit Division once again stood out, reinforcing its role as the guardian of organizational integrity.

At the organizational level, the evaluation results using the Risk Culture Aspect Model (IRM) show that PT. Air Minum ABC's risk culture is positioned at a moderate to maturing level, with a total score of 62 points. The themes of Tone at the Top and Informed Risk Decision Making received the highest scores, indicating leadership's commitment to risk management and active engagement in risk informed decision making. However, the aspects of Accountability, Risk Resources, and Rewarding Appropriate Risk Taking remained in the yellow category, highlighting the need for clearer distribution of risk roles, cross unit training, and a more structured and comprehensive risk based reward system.

Overall, the implementation of risk culture at PT. Air Minum ABC has shown a positive and measurable direction at both the individual and organizational levels. To further strengthen risk culture in a comprehensive and sustainable manner, the company is advised to:

1. Establish a documented and accessible risk reporting and feedback system across all organizational levels.
2. Enhance risk literacy through contextualized training that reaches all employees.
3. Improve risk accountability by clearly defining roles and responsibilities in every work unit.
4. Develop an integrated reward system that promotes risk-aware behavior as part of performance management.

The integration of the three approaches, namely risk personality (RTC), ethical values (Moral DNA), and organizational risk culture aspects (RCA), provides a holistic view that strengthening risk culture depends not only on structures and systems, but also on the character of individuals who shape collective behavior within the organization.

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