

MAPPING IDEA & LITERATURE FORMAT | RESEARCH ARTICLE

Risk Management Excellence in the Live Streaming Agency

Yoana Anggreini¹, Edi Hamdi², Dimas Angga Negoro³, Muhammad Dhafi Iskandar⁴

^{1,2,3,4} Magister of Management Program, Faculty of Economics and Business, Universitas Esa Unggul, Jakarta, Indonesia.
Email: jurnalueu@gmail.com

ARTICLE HISTORY

Received: January 23, 2026

Revised: March 04, 2026

Accepted: March 14, 2026

DOI

<https://doi.org/10.52970/grmilf.v6i2.2050>

ABSTRACT

This activity aims to identify potential risks faced by PT COT, analyze the probability and impact levels of risks, and evaluate the implementation of a risk management framework based on the principles of ISO 31000:2018. The activity method uses a qualitative descriptive approach, with case studies, interviews, observations, and documentation. The results of the activity indicate that PT COT faces risks across operational, financial, technological, legal, and human resource areas. Short-term risk management objectives focus on policy formulation, socialization of the framework, and the implementation of initial risk assessments. Medium-term objectives focus on strengthening information security, implementing a cybersecurity early-detection system, and preparing a Business Continuity Plan (BCP) and a Disaster Recovery Plan (DRP). Meanwhile, long-term objectives emphasize regulatory and technology evaluation, partner dependency risk mapping, and business portfolio diversification. This activity concludes that PT COT has designed a systematic, integrated, and continuous-improvement-oriented risk management system, thereby minimizing potential losses while supporting the company's resilience and competitiveness in the e-commerce live-streaming industry.

Keywords: Risk Management, ISO 31000:2018, Live Streaming Agency, E-Commerce, Business Sustainability.

I. Introduction

In recent years, global internet usage has continued to increase significantly. According to the We Are Social and Hootsuite (2024) report, more than 5.35 billion people worldwide use the internet, representing approximately 66.2% of the global population. China leads with the largest number of internet users, followed by India and the United States. Among ASEAN countries, Indonesia ranks fourth globally with more than 219.9 million internet users, meaning that approximately 66.5% of Indonesia's total population is connected to the internet. The growth of internet penetration in Indonesia is consistent with global trends, where most regions of the world have surpassed 50% internet penetration (Kristinawati, 2015; Prasetyo et al., 2024).



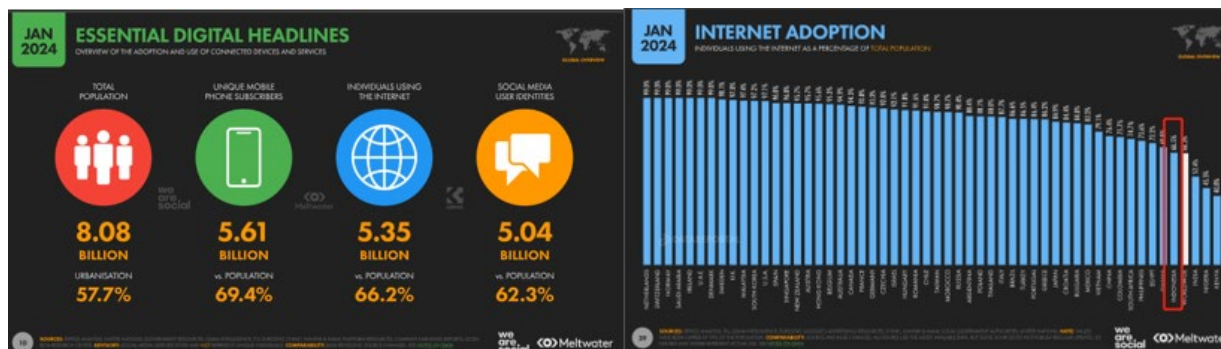


Figure 1. Internet Users Worldwide in 2024

Source: <https://wearesocial.com/>, 2024

This massive expansion of internet access indicates that digital connectivity is no longer limited to developed countries but is also rapidly expanding in developing nations, including Indonesia. As internet infrastructure continues to improve and access becomes increasingly affordable, digital platforms play an increasingly important role in shaping economic and social activities. The rise in global internet access has opened significant opportunities across sectors such as e-commerce, entertainment, education, and public services. In Indonesia, advancements in information and communication technology infrastructure have accelerated the growth of internet users, resulting in significant changes in consumer behavior and in how people access information and conduct daily transactions (Nasution et al., 2020; Rachmawati, 2020; Widjaya & Fasa, 2025). Beyond the increase in user numbers, patterns of internet use have also evolved considerably. According to the 2024 report from We Are Social and Hootsuite, the average internet user worldwide spends approximately 6 hours and 59 minutes per day online (Ekasari & Hadi Dharmawan, 2012; Guntoro et al., 2022; Kristinawati, 2015). This time is allocated to various digital activities, including social networking, video streaming, information searching, gaming, and online shopping. Notably, online shopping has become one of the most popular online activities, ranking fourth globally, with 74.3% of internet users engaging in this activity.

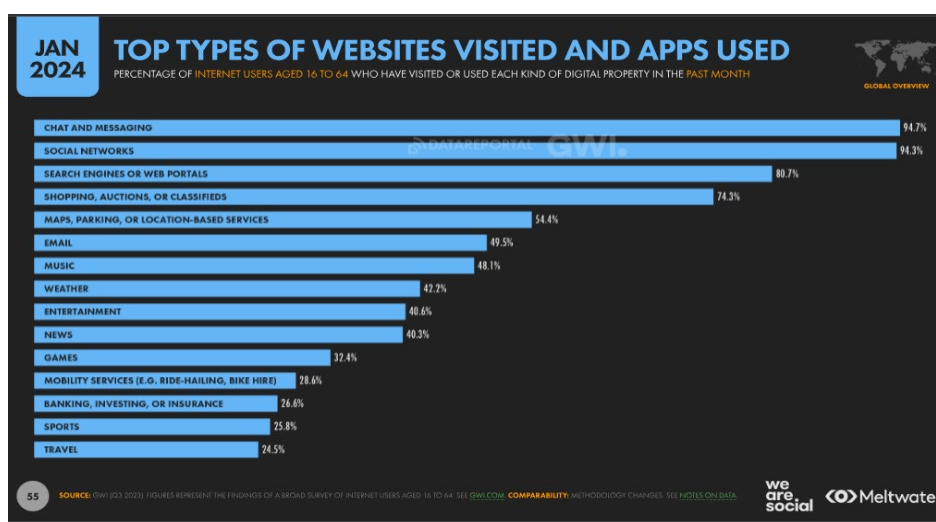


Figure 2. Levels of Internet Usage

Source: <https://wearesocial.com/>, 2024

The growing intensity of online engagement has naturally contributed to the rapid development of digital commerce. Online shopping has increasingly become a primary alternative for consumers when purchasing products or services. Globally, the e-commerce market was estimated to reach approximately USD

4 trillion in 2020, with annual revenue growth of 15% and order volume growth of 13% (Naseri et al., 2021). The convenience, speed, and flexibility offered by e-commerce platforms encourage consumers to shift from conventional shopping methods to online transactions. This shift is further supported by innovations such as digital payment systems, fast delivery services, and customer review features that facilitate purchasing decisions. Moreover, the COVID-19 pandemic significantly accelerated the adoption of online shopping due to mobility restrictions and the temporary closure of physical retail stores (Erwin et al., 2024; Nababan & Siregar, 2022). As e-commerce continues to expand, various online shopping models have emerged to accommodate diverse consumer preferences. One of the most popular forms is marketplace-based shopping, where consumers can access products from multiple sellers on a single platform, such as Shopee, Tokopedia, and Lazada in Indonesia. In addition to marketplace platforms, consumers may also purchase products directly from brand websites or through dedicated mobile applications that provide more personalized services and enhanced customer engagement (Ana et al., 2024; Musa & Nifita, 2019). In the Indonesian context, e-commerce growth has been particularly significant. Over the past five years, the number of e-commerce users has increased substantially. Data from Bank Indonesia and the Central Statistics Agency (BPS) show that the number of e-commerce users grew from approximately 140 million in 2019 to 198 million in 2023. Meanwhile, the value of e-commerce transactions increased from IDR 205 trillion in 2019 to more than IDR 401 trillion in 2021 and is projected to reach IDR 689 trillion in 2024. These figures indicate that e-commerce has become an integral part of Indonesian society's lifestyle, particularly in fulfilling daily needs.

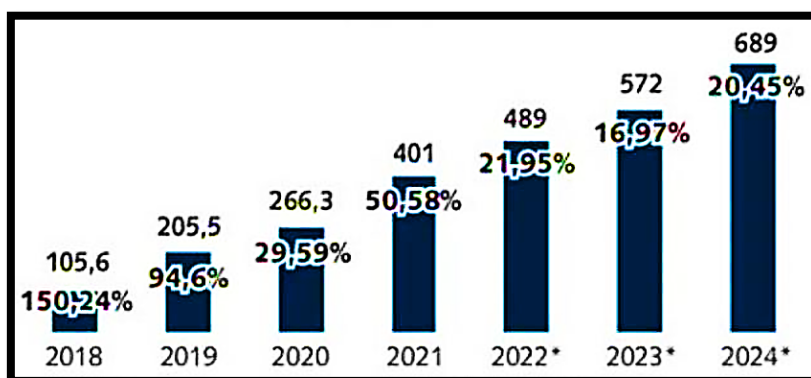


Figure 3. E-commerce Transaction Value in Indonesia

Source: Bank Indonesia, 2024

The dominance of marketplace platforms further strengthens this trend. According to a 2024 report from the Indonesian Internet Service Providers Association (APJII), 75% of Indonesian consumers prefer shopping on marketplaces due to wider product selection and more competitive prices than at standalone online stores. Data from iPrice also shows that Shopee has consistently recorded the highest number of visits in Indonesia over the past three years, followed by Tokopedia and Lazada. This pattern suggests that consumers tend to choose platforms that offer convenience, variety, and transaction security (Rumasukun, 2024). In response to increasingly competitive marketplace dynamics, platforms continue to innovate by introducing interactive features to enhance consumer engagement. One of the most prominent innovations is the integration of live streaming as a marketing and selling tool. Liu et al. (2022) define live streaming as a real-time video broadcast on a digital platform, enabling hosts to interact directly with audiences through comments and questions. This feature not only increases engagement between sellers and consumers but also enables live product demonstrations, strengthening consumer trust and influencing purchasing decisions.

Given the rapid expansion of live-streaming commerce, companies operating in this ecosystem must carefully manage potential risks that could affect business sustainability. Therefore, this study aims to identify potential risks faced by PT Check Out Time (COT) as a live streaming agency, including operational, financial, technological, legal, and human resource risks. Furthermore, this study analyzes the probability and impact

levels of these risks on business continuity and corporate strategy. In addition, this study evaluates the implementation of PT COT's risk management framework based on the principles of ISO 31000:2018 to assess its effectiveness. Based on this evaluation, the study formulates appropriate risk mitigation strategies, including the development of a Business Continuity Plan (BCP) and Disaster Recovery Plan (DRP), as part of efforts to support long-term business sustainability. Ultimately, the findings are expected to provide strategic recommendations for enhancing PT COT's risk management system through a continuous improvement approach, thereby strengthening its resilience and competitiveness in the live streaming e-commerce industry (Syahrel & Khadafie, 2026).

II. Literature Review and Hypothesis Development

2.1. Risk Management

Risk is generally defined as the possibility of an event that may affect the achievement of organizational objectives. Risk comprises two main elements: uncertainty and impact. The impact may be negative (threat) or positive (opportunity). In a business context, risk arises from both internal and external factors that may disrupt operations, financial stability, organizational reputation, or long-term sustainability (Dewi & Sari, 2024). According to ISO 31000:2018, risk is defined as the effect of uncertainty on objectives. This definition emphasizes that risk is not merely about potential losses but also about deviations from expected outcomes (Hubbard, 2009). Risk management is a systematic approach organizations use to identify, analyze, evaluate, and control risks that may affect the achievement of business objectives. It is a structured and continuous process aimed at minimizing potential losses while simultaneously optimizing opportunities (Mošková & Buganová, 2023). Risk management is no longer viewed as a reactive function but rather as a strategic management tool integrated into corporate governance and organizational decision-making processes. Organizations that effectively implement risk management can improve operational stability, enhance stakeholder confidence, and strengthen their competitive advantage (Suyudi, 2023). The main objectives of risk management include:

- a. Protecting organizational assets and resources.
- b. Ensuring operational continuity and business sustainability.
- c. Minimizing potential losses arising from uncertain events.
- d. Supporting effective and informed decision-making processes.

2.2. Live Streaming

Live streaming refers to the real-time broadcasting of video content through digital platforms that enables direct interaction between broadcasters and audiences. Unlike pre-recorded video content, live streaming allows immediate communication through features such as comments, reactions, and live chat (Octasylya & Rurianto, 2020). In the context of e-commerce, live streaming integrates entertainment and transactional functions into a single activity. This format is often called live-streaming commerce, in which hosts or streamers promote products while interacting directly with viewers, answering questions and providing product demonstrations in real time. The interactive nature of live streaming differentiates it from traditional online shopping models (Lynn & Fathi, 2023). Live streaming commerce has several distinctive characteristics:

- a. Real-Time Interaction: Consumers can communicate directly with the host, which increases engagement and trust.
- b. Product Demonstration: Products are presented and tested live, reducing information asymmetry between sellers and consumers.

- c. Social Presence: The presence of other viewers and real-time comments creates a sense of community and urgency.
- d. Instant Purchasing Mechanism: Integrated purchase buttons enable viewers to buy products without leaving the live streaming session.

These characteristics make live streaming not only a marketing channel but also a direct sales platform. In academic studies, live streaming as a research variable is often measured through several dimensions:

- a. Interactivity – the degree of two-way communication between the host and the audience.
- b. Informativeness – the clarity and completeness of product information delivered during the live session.
- c. Entertainment Value – the level of attractiveness and enjoyment created by the host during the broadcast.
- d. Credibility/Trustworthiness – the audience's perception of the host's honesty, reliability, and professionalism.
- e. Technical Quality – the stability of the internet connection, as well as the clarity of audio and video resolution.

III. Research Method

3.1. Research Design

This study employs a qualitative research approach with a case study design to explore the implementation of risk management in the live streaming agency at PT Check Out Time (COT). The qualitative approach is chosen because it enables the researcher to gain an in-depth understanding of the processes, practices, and challenges of risk management within the organization. The case study design is considered appropriate because the research focuses on a specific organization and aims to examine actual conditions within its operational environment. The research was conducted at PT Check Out Time (COT), a live-streaming agency within the e-commerce ecosystem. The research subjects were selected using purposive sampling, focusing on individuals directly involved in company operations and in risk management decision-making. The informants include company management, operational staff, finance personnel, and technical teams involved in the live streaming process.

3.2. Data Collection

Data were collected through in-depth interviews, documentation, and observation. In-depth interviews were conducted using semi-structured questions to obtain detailed information about potential risks faced by the company, the risk assessment process, and the mitigation strategies implemented. Documentation analysis was conducted by reviewing company records, including standard operating procedures (SOPs), operational reports, and other relevant documents.

In addition, direct observation was conducted to understand the operational processes involved in live streaming activities and to identify potential risks that may arise during these activities.

3.3. Data Analysis

The data were analyzed using the interactive model of Miles and Huberman, which consists of three stages: data reduction, data display, and conclusion drawing. Data reduction involves selecting and focusing

on relevant information related to risk management practices. Data display is conducted by organizing the data into structured descriptions and risk mapping. Finally, conclusions are drawn to evaluate the effectiveness of the risk management practices implemented at PT Check Out Time (COT). To enhance the credibility of the findings, this study applies data triangulation by comparing information obtained from interviews, observations, and documentation. The analysis of risk management practices is also evaluated against the ISO 31000:2018 risk management framework, which serves as the primary reference for identifying, assessing, and developing risk mitigation strategies within the company.

IV. Result and Discussion

The results of the identification of partner issues in live streaming indicate several major obstacles that disrupt the effectiveness of online sales activities. Technically, partners often experience challenges such as unstable internet connections that degrade broadcast quality, limited equipment such as cameras, lighting, and audio that reduces professionalism, and disruptions to the live streaming platform that sometimes hinder promotional activities. Operationally, several issues also arise, including mismatches between stock availability and promoted products, difficulties in quickly recording and managing orders during broadcasts, and shipping delays that trigger customer complaints. From a marketing perspective, partners face increasing competition due to the large number of stores using similar strategies. In addition, attracting significant viewership is difficult without additional promotion, and the lack of content differentiation makes live streams less competitive. Meanwhile, from a human resources perspective, hosts who lack adequate training in product presentation and audience engagement present a challenge. This situation is further compounded by excessive workloads resulting from long live broadcasts and inconsistent coordination among hosts, administrators, and logistics personnel. To address potential problems, several preventive measures are implemented through short-, medium-, and long-term risk management strategies. Short term targets in this risk management include the availability of policy documents and corporate risk management frameworks by the end of the first year, the socialization of the framework to all work units at least twice within the current year, the implementation of at least one comprehensive risk assessment covering strategic, operational, financial, and compliance risks, and the reporting of risk identification and evaluation results in the form of a risk matrix with classifications of impact and probability. Medium term targets include conducting periodic information security assessments at least once every six months through internal audits or penetration tests, implementing an early detection system for cybersecurity incidents at all critical points of the IT infrastructure, preparing Business Continuity Plan (BCP) and Disaster Recovery Plan (DRP) documents in the third year, and conducting BCP simulation exercises once per year in all strategic units.

The long term goals include establishing an annual review mechanism for the regulatory and technological landscape that affects PT COT's business continuity, producing emerging risk projection reports and strategic adaptation recommendations every two years, developing a portfolio map of critical partners and suppliers with dependency risk analysis, and ensuring that no single partner contributes more than 40 percent of the total business volume for more than three consecutive years. Risk management is a crucial element that PT COT must implement to achieve its corporate objectives, particularly in the dynamic, competitive live-streaming industry. Risks can arise across operations, law, finance, technology, and human resources. Therefore, a systematic, integrated approach focused on continuous improvement is necessary to identify, analyze, and manage risks effectively. In implementing risk management, PT COT adheres to the principles established by ISO 31000:2018. These principles not only guide the risk management process but also ensure that every business decision is supported by comprehensive risk analysis. The following section explains several risk management principles relevant to PT COT and how the company can implement them. Risk management is an integral part of all PT COT processes, including strategy formulation, operational activities, and decision making. By integrating risk management into core business processes, PT COT can ensure that every activity and decision considers potential risks and opportunities, thereby increasing the company's chances of achieving its objectives.

PT COT also manages risks using a systematic and structured approach that covers all aspects of the organization. This approach ensures that risks are properly identified, analyzed, and evaluated so that no potential threats or opportunities are overlooked during planning or implementation. Under the third principle, namely the adjustment principle, risk management at PT COT is designed to align with the company's organizational context, including its objectives, structure, culture, and business environment. By adjusting its risk management approach, PT COT can address risks more effectively and in a way that is relevant to its specific conditions. The inclusive principle emphasizes that PT COT involves all stakeholders, including management, employees, and strategic partners, in the risk management process. This involvement ensures that diverse perspectives and relevant information are considered, leading to more accurate and comprehensive decision-making. A rapidly changing business environment requires a flexible risk management approach. PT COT must continuously monitor and adapt its risk management strategy to internal and external changes, including technological developments, new regulations, and evolving market trends. Risk-related decisions at PT COT are based on the best available data and information. By using accurate, relevant data, the company can enhance the reliability of its risk analysis and reduce decision-making uncertainty. PT COT also considers human and cultural factors in risk management, including organizational values, team member behavior, and social dynamics. By understanding these factors, the company can better manage risks associated with human interactions and ensure the effective implementation of its risk management strategy. Finally, PT COT is committed to continuously improving its risk management system. This commitment is realized through regular evaluations, updated procedures, and the adoption of new technologies, ensuring the risk management approach remains relevant and effective in addressing future challenges.

4.1. Risk Management Framework

As a live streaming company, PT COT faces various risks across operational, technological, financial, and human resource areas. To ensure operational and strategic success, PT COT implements a structured risk management framework in accordance with ISO 31000:2018. This framework includes key steps designed to help PT COT achieve its business objectives by proactively mitigating risks, ensuring operational efficiency, and supporting the company's long-term sustainability. Risk management at PT COT begins with a strong commitment from top management. Company leaders are responsible for establishing a risk management vision and policies that align with business objectives. They also ensure adequate resource allocation to support risk management implementation, including team member training and the development of relevant technologies. This commitment fosters a positive risk culture throughout the organization. Risk management at PT COT does not operate in isolation; it is integrated into all key business processes, including strategic planning, daily operations, and decision-making. Through this approach, PT COT ensures that every activity and decision considers potential risks and opportunities. For example, risk analysis is consistently incorporated into the evaluation of new projects, such as the development of a studio or collaboration with strategic partners. The risk management framework at PT COT is designed to address the company's specific needs. This process involves identifying both internal and external contexts, including organizational structure and work culture, as well as regulations and market trends. In addition, PT COT defines clear roles and responsibilities for each level of management regarding risk management while ensuring effective communication with all stakeholders, both internal and external.

PT COT implements risk management by integrating risk mitigation measures into daily work processes. Each department is responsible for identifying risks relevant to its function, such as operations, finance, or technology. For example, the operations team manages risks related to the quality of live streaming services, while the finance team monitors risks associated with budget and revenue management. Regular training programs are also conducted to ensure that all employees understand their roles in the risk management process. PT COT regularly monitors and evaluates the effectiveness of its risk management framework. This evaluation includes measuring performance against predetermined risk indicators and

identifying weaknesses in the risk management process. The results of this evaluation are reported to top management and serve as a basis for further decision-making to improve the company's risk management strategy. As part of its commitment to continuous improvement, PT COT actively identifies opportunities to enhance its risk management framework. This includes updating policies, adopting new technologies, and adjusting procedures in response to changes in the business environment. Through this approach, PT COT ensures that its risk management practices remain relevant and effective in addressing future challenges.

4.2. Risk Management Process

The risk management process is designed to support the achievement of PT COT's strategic objectives, maintain business continuity, and provide added value to stakeholders. The following are the main stages in PT COT's risk management process. The first step in the risk management process is defining the scope, context, and criteria. PT COT must understand internal factors such as organizational structure, work culture, and company strategy, as well as external factors such as industry trends, regulations, and competitors. At this stage, the company also establishes risk criteria, including risk tolerance and success indicators, which serve as the basis for evaluating risks across all operational areas.

a. Scope

PT COT's risk management scope covers all aspects of the company's business, including live streaming operations, studio rentals, content management, and collaboration with strategic partners such as PT WOOK. Any activity that has the potential to influence the company's objectives, either directly or indirectly, falls within this scope. In addition, the scope includes managing risks arising from external factors, such as government regulations and the dynamics of the e-commerce market.

b. Context

The risk management context at PT COT includes internal and external factors that influence the company's operations. Internal factors include organizational structure, corporate culture, strategic objectives, and available resources, such as human resources and technology. External factors include live streaming market trends, relevant regulatory developments, industry competition, and relationships with strategic partners and MSMEs. A comprehensive understanding of this context enables PT COT to identify relevant risks and develop appropriate mitigation strategies.

c. Criteria

Risk management criteria at PT COT are used to evaluate risks based on the company's acceptable tolerance level. These criteria include an assessment of the likelihood of a risk occurring, its impact on company objectives, and the priority level for handling it. PT COT establishes specific risk indicators, such as operational disruptions that may affect the number of live streaming sessions, data security breaches, or incompatibilities with strategic partners. Through these criteria, PT COT ensures that significant risks receive adequate attention and proper management.

Table 1. Risk Probability PT COT

Frequency/Likelihood			
Explanation	Definition	Quantitative Indicators	Score
Very often	The risk is almost certain to recur within a short period of time.	> 1x per month / more than 12x in a year	5
Often	Risks are likely to occur several times within an annual operational period.	About 4–12 times per year	4

Frequency/Likelihood			
Explanation	Definition	Quantitative Indicators	Score
Sometimes	Risks may occur in the medium term; events are recorded in an annual cycle.	1–3 times per year	3
Seldom	Risks are not common, but can occur under certain conditions.	Once every 2–3 years	2
Very rarely	The risk is very unlikely, but not impossible.	<1 time in 5 years	1

Table 2. Risk Impact Criteria at PT COT

Severity	Description	Score
Very Heavy	Causes total or substantial negative impact on operations, reputation, finances, or legal aspects.	5
Heavy	Disrupts most of the company's core functions and causes major financial losses or reputational damage.	4
Moderate	Causes temporary operational disruption and significant customer complaints.	3
Light	Causes minor disturbances that can be resolved without serious consequences and do not affect primary objectives.	2
Not Significant	Has almost no impact and does not result in meaningful complaints or losses.	1

Within the ISO 31000:2018 framework, risk assessment at PT COT consists of risk identification, risk analysis, and risk evaluation. The objective of this assessment is to understand the impact and likelihood of risks and to categorize them by level of relevance. PT COT identifies risks that may hinder the achievement of company objectives, analyzes their impact and frequency, and evaluates them according to their level of significance. This assessment is essential for effective risk management and appropriate decision-making.

d. Risk Identification

PT COT identifies all potential risks that may affect the achievement of the company's objectives. These risks may originate from technological factors, such as disruptions to streaming platforms, human resource factors, such as the lack of competent personnel, or financial factors, such as revenue fluctuations.

e. Risk Analysis

After risks are identified, PT COT analyzes the likelihood and impact of each risk. This analysis may apply qualitative or quantitative methods to determine which risks are most critical and require priority attention.

f. Risk Evaluation

The analyzed risks are then evaluated to determine whether they are acceptable or require further treatment. Risks that are considered unacceptable will proceed to the next stage, namely risk treatment. PT

COT develops strategies to address the identified and evaluated risks. These strategies include risk mitigation by reducing the impact or likelihood of risks, risk transfer through mechanisms such as insurance, risk avoidance, or risk acceptance when the potential impact is minimal. For example, to address data security risks, PT COT implements data encryption and seeks ISO 27001 certification to strengthen its cybersecurity.

g. Communication and Consultation

The risk management process at PT COT involves effective communication with all stakeholders, both internal and external. Employees, strategic partners, and shareholders are informed about potential risks and the company's mitigation measures. Consultation activities are also carried out to ensure that risk-related decisions consider various perspectives and gain support from relevant stakeholders.

h. Monitoring and Review

Risks and mitigation measures implemented by PT COT are regularly monitored and reviewed to ensure their effectiveness. This process includes identifying emerging risks, evaluating the performance of existing mitigation strategies, and updating the risk management approach in response to changes in the business environment. PT COT also conducts regular internal audits to measure compliance with established risk management policies.

4.3. Risk Management Cost Budget

Risk management is a crucial element for PT COT to ensure operational continuity in the competitive, dynamic live-streaming industry. As part of its risk mitigation strategy, the company needs to allocate a budget to various activities that support effective risk management, including team member training and improvements to security infrastructure. This budget is designed to cover preventive and mitigation measures to address risks that may affect service quality, data security, and operational safety. The following section presents the allocation of PT COT's risk management budget, which includes several important components that support business sustainability.

a. Process Compliance Audits

Internal audits are an essential component in ensuring the sustainability of business processes and the effectiveness of operational controls. During the initial phase, internal audits focus on establishing control systems and standard operating procedures. As the business develops, budgets are allocated for quarterly audits covering studio operations, host or KOL compliance, and documentation systems. In the fourth and fifth years, the audits also include evaluations of operational feasibility prior to external certification.

b. Security Software Subscription (Antivirus and Firewall)

As a digital company that manages broadcast data, live performances, and creative content, PT COT faces risks from data breaches and cyberattacks. Therefore, the company allocates a budget for antivirus and firewall subscriptions starting in the first year. This budget covers the initial system setup, security software licenses for the operational team and the BICOT server system, and a cloud firewall subscription that supports real-time data protection.

c. ISO Preparation and Certification

As part of its efforts to strengthen governance and competitiveness, PT COT plans to obtain ISO 27001 certification. In the third year, the company conducts basic preparation and training related to the certification requirements. The fourth year is allocated for the official certification audit process, while the fifth year is dedicated to surveillance audits and document updates. This initiative aims to enhance credibility, strengthen information security, and increase client trust.

d. Generator and Maintenance

To mitigate the risk of power outages that may disrupt live streaming sessions, PT COT provides a generator with sufficient capacity to support the main studio's operational needs. The cost of purchasing and installing the generator is allocated during the pre-operational phase. Annual maintenance costs are also budgeted to maintain the reliability of the backup power system, including oil replacement, technical servicing, and generator performance testing.

e. Stabilizer and Maintenance

Voltage fluctuations may damage studio equipment, including cameras, lighting systems, and production computers. Therefore, PT COT provides voltage stabilizers to protect these electronic devices. Annual maintenance is also required to ensure optimal stabilizer performance through output inspections, internal cleaning, and periodic calibration.

f. CCTV and Maintenance

To reduce the risk of asset loss and maintain operational security, PT COT installs CCTV systems throughout the studio and office areas. The budget includes the purchase of cameras, an NVR system, storage hard drives, and installation costs. In addition, annual maintenance is required for camera inspections, recording system checks, and periodic replacement of storage devices.

g. Lightning Rod Installation for a Three-Story Building

The installation of lightning rods on the three-story building aims to protect the building structure and electronic equipment from lightning strike risks. This budget covers essential components, including lightning arresters, conductor cables, grounding systems, and installation costs. The system design follows safety standards and technical requirements to ensure optimal performance and to prevent potential losses.

h. Insurance

At the beginning of the first year, PT COT purchases cyber liability insurance to protect the company against losses arising from cyber incidents, including data breaches, ransomware attacks, legal expenses, and system recovery costs. In addition, PT COT purchases commercial property insurance to protect business assets, including studio equipment and operational devices, which represent the company's primary assets.

Table 3. Risk Management Cost Budget

No	Budget Item	Pre Operational	Year 1	Year 2	Year 3	Year 4	Year 5
1	Process Compliance Audit	10,000,000	10,000,000	10,000,000	10,000,000	20,000,000	20,000,000
2	Security Software Subscription		23,300,000	23,300,000	23,300,000	23,300,000	30,000,000
3	ISO 27001 Preparation and Certification				10,000,000	30,000,000	20,000,000
4	Generator and Maintenance	119,000,000	6,600,000	6,600,000	6,600,000	66,100,000	13,200,000
5	Stabilizer and Maintenance	4,000,000	1,350,000	1,350,000	1,350,000	5,350,000	2,700,000

No	Budget Item	Pre Operational	Year 1	Year 2	Year 3	Year 4	Year 5
6	CCTV and Maintenance	30,000,000	4,000,000	4,000,000	4,000,000	19,000,000	8,000,000
7	Lightning Rod for a Three-Story Building	15,000,000					15,000,000
8	Cyber Insurance and Commercial Property		60,000,000	60,000,000	60,000,000	60,000,000	120,000,000
	Total	178,000,000	105,250,000	105,250,000	115,250,000	223,750,000	228,900,000

Source: Author Team, 2025

The selection of the ISO 31000:2018 framework for the study entitled "Risk Management Excellence in the Live Streaming Agency at PT Check Out Time (COT)" is based on several academic and practical considerations. First, ISO 31000:2018 is a universal and flexible international standard that can be applied to organizations of all sizes, including large, medium, and small enterprises, across diverse industry sectors such as digital and e-commerce. Since PT Check Out Time (COT) operates as a digital live streaming agency, it requires a framework that can adapt to the dynamics of technological and operational risks, and ISO 31000 effectively facilitates this. Second, ISO 31000:2018 emphasizes an integrated and strategic approach to risk management. Risk is not viewed as a separate function but as an integral part of the organization's decision-making and strategic planning processes. This perspective aligns with the research objective, which is not only to identify risks but also to evaluate the level of risk management maturity and excellence in supporting the business sustainability of PT COT. Third, the ISO 31000:2018 framework provides a systematic and comprehensive process structure that includes the following stages:

- a. Determination of context, including scope, context, and criteria
- b. Risk identification
- c. Risk analysis
- d. Risk evaluation
- e. Risk treatment
- f. Monitoring and review
- g. Communication and consultation

This structured process enables researchers to conduct step-by-step, measurable analyses, including risk mapping using probability and impact matrices. Fourth, ISO 31000:2018 emphasizes the principle of continuous improvement. This principle is highly relevant to the concept of Risk Management Excellence because excellence in risk management is not measured solely by the existence of a system, but also by the organization's ability to evaluate and improve its practices continuously. In the highly dynamic and competitive live streaming industry, the ability to adapt to emerging risks is critical. Fifth, compared with other frameworks such as COSO Enterprise Risk Management (ERM), which are more commonly applied in the context of financial reporting and governance of public companies, ISO 31000 is more flexible and emphasizes the overall risk management process. This characteristic makes it more suitable for a digital operations-based organization such as PT COT. Therefore, the application of ISO 31000:2018 in this study aims to evaluate the conformity of PT COT's risk management practices with international standards, identify gaps between current practices and the principles of ISO 31000, and formulate recommendations for improving the risk management system so that it becomes more structured, integrated, and oriented toward long-term business

sustainability. Overall, ISO 31000:2018 is selected because it provides a comprehensive and adaptable conceptual and operational framework that is relevant to the risk characteristics of the e-commerce live-streaming industry.

V. Conclusion

PT Check Out Time (COT) faces significant challenges in the live streaming agency industry, which operates in a dynamic business environment where risks can arise across operational, technological, legal, financial, and human resource areas. To ensure business sustainability, PT COT implements a risk management system aligned with ISO 31000:2018, ensuring that every strategic and operational decision is supported by comprehensive risk analysis. The study's results show that PT COT's risk management objectives are structured into three stages. In the short term, the focus is on developing policy documents, disseminating the risk management framework, and conducting initial risk assessments. In the medium term, the company aims to strengthen information security, implement early detection systems for cybersecurity risks, and prepare the Business Continuity Plan (BCP) and Disaster Recovery Plan (DRP). In the long term, the strategy emphasizes evaluating regulatory and technological developments, mapping partner dependency risks, and diversifying business portfolios to reduce potential systemic risks. By implementing the principles of ISO 31000, PT COT has successfully integrated risk management into all business processes, from strategic planning to daily operations. This approach not only enhances risk mitigation effectiveness but also strengthens client trust, operational stability, and the company's overall competitiveness. With dedicated budget allocations for compliance audits, ISO 27001 certification, data security systems, insurance, and supporting infrastructure such as generators and stabilizer systems, PT COT demonstrates a strong commitment to developing a sustainable and comprehensive risk management system.

References

- Ana, S., Anis Satun Nur Khoiriyah, Sintiawati Sintiawati, & Riki Gana Suyatna. (2024). Analisis Perbedaan Antara Pengalaman Pembelian Online Dan Offline Dalam Mempengaruhi Perilaku Konsumen. *Jurnal Bintang Manajemen*, 2(1), 65–74. <https://doi.org/10.55606/jubima.v2i1.2608>
- Dewi, D., & Sari, S. (2024). Risk Management Towards The Recovery And Sustainability of the SMEs Business in the Post-COVID-19 Era Dita Nurul Aini Mustika Dewi A, Santi Retno Sari B Article History : Received 17 October 2023 Keywords : Risk Management ; Risk Management Towards the R. 1–15.
- Ekasari, P., & Hadi Dharmawan, A. (2012). Dampak Sosial-Ekonomi Masuknya Pengaruh Internet Dalam Kehidupan Remaja Di Pedesaan. *Sodality: Jurnal Sosiologi Pedesaan*, 6(1). <https://doi.org/10.22500/sodality.v6i1.5809>
- Erwin, P., Dela Setia Cahyani, F. W., & Syamsurizal Syamsurizal. (2024). Analisis Kepuasan Generasi Z Terhadap Layanan E-Commerce. *Jurnal Ilmiah Ekonomi, Akuntansi, Dan Pajak*, 1(2), 337–355. <https://doi.org/10.61132/jieap.v1i2.312>
- Guntoro, H., Rikardo, D., Amirullah, F., A., & Suarsana, I. P. (2022). Analisis Hubungan Kebersihan Cargo Bilges dengan Cargo Hold dalam Mendukung Kelancaran Proses Bongkar Muat. *Journal Marine Inside*, 1(2), 1–32. <https://doi.org/10.56943/ejmi.v1i2.9>
- Hubbard, D. (2009). *Failure of Risk Management: Why It is Broken and How to Fix It*. <https://doi.org/10.1002/9781119521914>
- Kristinawati, E. (2015). Pola Penggunaan Internet Oleh Kalangan Remaja Di Kabupaten Semarang Ester Krisnawati. Pola Penggunaan Internet Oleh Kalangan Remaja Di Kabupaten Semarang, 319–350. <https://ejournal.uksw.edu/cakrawala/article/view/50%0Ahttps://ejournal.uksw.edu/cakrawala/article/download/50/45>
- Liu, X., Zhang, L., & Chen, Q. (2022). The effects of tourism e-commerce live streaming features on consumer purchase intention: The mediating roles of flow experience and trust. *Frontiers in Psychology*, 13(August), 1–14. <https://doi.org/10.3389/fpsyg.2022.995129>

- Lynn, J., & Fathi, N. (2023). The Roles of Social Media Influencers on Online Fundraising in Indonesia. *Journal of Indonesian Economy and Business*, 38(2), 105–118. <https://doi.org/10.22146/jieb.v38i2.6010>
- Mošková, E., & Buganová, K. (2023). Improving Business Sustainability by Connecting Business Continuity Management and Risk Management. *WSB Journal of Business and Finance*, 57(1), 38–45. <https://doi.org/10.2478/wsbjbf-2023-0005>
- Musa, A., & Nifita, A. T. (2019). Preferensi konsumen dalam berbelanja di online shop. *Jurnal Dinamika Manajemen*, 7(1), 153–162. <https://online-journal.unja.ac.id/jmbp/article/view/16943>
- Nababan, D. F., & Siregar, O. M. (2022). Analisis Perilaku Konsumen Generasi Milenial Dalam Memutuskan Pembelian Secara Online pada Masa Pandemi Covid-19 di Kota Medan. *Journal of Social Research*, 1(6), 545–555. <https://doi.org/10.55324/josr.v1i6.114>
- Nasution, E. Y., Hariani, P., Hasibuan, L. S., & Pradita, W. (2020). Perkembangan transaksi bisnis E-Commerce terhadap pertumbuhan ekonomi di Indonesia. *Jesya*, 3(2), 506–519. <https://doi.org/10.36778/jesya.v3i2.227>
- Octasyva, A. R. P., & Rurianto, J. (2020). Analisis Industri Telekomunikasi Seluler di Indonesia: Pendekatan SCP (Structure Conduct Performance). *INOBI: Jurnal Inovasi Bisnis dan Manajemen Indonesia*, 3(3), 391–408. <https://doi.org/10.31842/jurnalinobis.v3i3.146>
- Prasetyo, S., Gustiawan, R., & Rizzel Albani, F. (2024). BIHKMA : Buletin Ilmiah Ilmu Komputer dan Multimedia Analisis Pertumbuhan Pengguna Internet di Indonesia. *Biikma*, 2(1), 65–71. <https://jurnalmahasiswa.com/index.php/biikma>
- Rachmawati, R. R. (2020). Smart Farming 4.0 untuk mewujudkan pertanian Indonesia maju, mandiri, dan modern. Smart Farming 4.0 to build advanced, independent, and modern Indonesian agriculture. Rika Reviza Rachmawati. *Forum Penelitian Agro Ekonomi*, 38(2), 137–154. <http://dx.doi.org/10.21082/fae.v38n2.2020.137-154>
- Rumasukun, M. R. (2024). The Effect of Global Monetary Policy Changes on the Financial Strategy of International Companies. *Golden Ratio of Mapping Idea and Literature Format*, 4(2), 167–182. <https://doi.org/10.52970/grmilf.v4i2.397>
- Suyudi, I. (2023). The Digital Revolution in Sports: Analyzing the Impact of Information Technology on Athlete Training and Management. *Golden Ratio of Mapping Idea and Literature Format*, 3(2 SE-Research Articles & Mapping Literature), 140–155. <https://doi.org/10.52970/grmilf.v3i2.343>
- Syahrel, S., & Khadafie, M. (2026). Innovation in Electronic-Based Archive Arrangement at the Personnel and Human Resources Development Agency of West Sumbawa Regency. *Golden Ratio of Mapping Idea and Literature Format*, 6(2 SE-Research Articles & Mapping Literature), 1363–1373. <https://doi.org/10.52970/grmilf.v6i2.1753>
- Widjaya, A., & Fasa, M. (2025). Analisis Peran E-commerce dalam Mendorong Pertumbuhan Ekonomi Digital di Indonesia. *Jurnal Bersama Ilmu Ekonomi (EKONOM)*, 1(2), 96–102. <https://doi.org/10.55123/ekonom.v1i2.60>