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# EVALUATION OF MANAGEMENT INFORMATION SYSTEM IMPLEMENTATION AT PT INDO EMKAY ABADI

Robby Adha Nursetia[1)], Ai Rosita[2)]
[1)] Management Study Program, Universitas Terbuka, Indonesia
[2)]Faculty of Engineering, Universitas Widyatama Bandung, Indonesia
Corresponding author: robynursetia2@gmail.com

## ABSTRACT

*This research seeks to assess the application of the Management Information System (MIS) within the company through a descriptive qualitative method. The evaluation process utilizes the CIPPO framework (Context, Input, Process, Product, Outcome). Data collection was conducted using interviews and questionnaires, targeting respondents with firsthand experience in utilizing the MIS.The research findings indicate that MIS adoption enhances management efficiency and effectiveness, contributing positively to the company's sustainability in the digital era. However, challenges such as human resource adaptation to new technologies were identified. The system aligns well with the company's needs, although some implementation objectives remain underway.Respondents suggested adding Artificial Intelligence (AI)-based features to enhance system capabilities. Further research involving diverse industries and detailed analysis of each CIPPO model component is recommended to validate the findings.*

**Keywords:** Evaluation, MIS, PT Indo Emkay Abadi

## Introduction

In the rapidly evolving digital era, implementing a Management Information System (MIS) has become a strategic step for companies to enhance operational efficiency and competitiveness. MIS not only facilitates data-driven decision-making but also ensures smooth operational processes within organizations. PT Indo Emkay Abadi, as a technology-based company, has adopted MIS to manage operations and support strategic decision-making.

According to Asyiam (2022) and Ibrahim & Violita (2023), MIS serves as one of the primary tools for technology companies to address operational challenges while optimizing their business processes in managing rapid growth. MIS is defined as an integrated system designed to provide information to support operational activities, managerial functions, and decision-making within an organization (O'Brien, 2002). Essentially, MIS integrates input, processing, and output processes to fulfill information needs, ensuring organizational sustainability.

Historically, the concept of information systems predates the modern computer era. In the mid-20th century, data processing using punch cards marked the initial phase of information system evolution, albeit limited to accounting applications known as Accounting Information Systems (AIS). However, with the introduction of new-generation computers in 1964, featuring silicon chip circuitry, information systems experienced significant advancements. This era marked the use of computers for managerial information needs, bridging the gap between technology and managerial decision-making (O'Brien, 2002).

Further developments introduced new concepts such as Decision Support Systems (DSS), designed to support data-driven decision-making, and Office Automation (OA), which enhances work productivity through communication technology. Recently, innovations based on Artificial Intelligence (AI) have gained prominence in MIS transformation. AI enables computers to process logic akin to human brain functions, providing automated solutions for various managerial challenges through applications like Expert Systems (ES).

At PT Indo Emkay Abadi, the implementation of a Management Information System (MIS) represents a strategic initiative to enhance operational efficiency and support informed decision-making. This research evaluates the effectiveness of the MIS in the company using the CIPPO evaluation model (Context, Input, Process, Product, Outcome). The model enables a thorough examination of organizational requirements, resource quality, implementation procedures, achieved results, and the system's influence on stakeholder satisfaction and overall performance.

This research is expected to offer new insights into optimizing MIS to achieve the objectives of technology companies in the digital transformation era.

## Methods

This study utilized a qualitative method, with the researcher serving as the primary instrument to collect data thoroughly and systematically. As stated by Wirawan (2011:22), qualitative data encompasses detailed descriptions of circumstances, events, individuals or units, interactions, behaviors, observed processes, direct quotes from respondents, as well as attitudes, beliefs, thoughts, excerpts or complete documents, recordings, correspondence, notes, and recommendations for program implementation within a specific timeframe.

A descriptive approach was adopted in this research, and data were collected using the following methods:

1. **In-depth Interviews**: Conducted with five departmental managers responsible for the implementation and use of the Management Information System (MIS). The interviews were carried out over a one-month period, with each session lasting an average of 1.5 hours.
2. **Direct Observations**: Observations were made on the process of implementing and using the MIS, including user interactions with the system and performance evaluations of the system.
3. **Documentation**: Internal company documents, such as MIS implementation reports, user manuals, and system evaluation reports, were analyzed.

The evaluation model used in this research was the CIPPO model. This model was chosen as it can assess all aspects of the implementation of the management information system at PT Indo Emkay Abadi comprehensively. The CIPPO evaluation model provides a detailed and thorough depiction of the system's success. This aligns with Jaedun's (2010:10) statement: "To evaluate a program, apart from the four components—Context (C), Input (I), Process (P), and Product (P)—it is also necessary to evaluate the Outcome (O), which refers to how the program's or system's success impacts stakeholders and the organization." Huey (2015:60) reinforces that outcomes are the benefits experienced by stakeholders after the implementation of a system.

The following is the evaluation process diagram used, with each component of the CIPPO evaluation model explained as follows:

1. **Context Evaluation**: Evaluates the needs of the management information system and its alignment with organizational goals. Has the system been designed and implemented based on the actual needs of the organization and stakeholders?
2. **Input Evaluation**: The second stage in the CIPPO model evaluates the resources supporting the application of the management information system, such as software, hardware, experts, and budget.
3. **Process Evaluation**: This stage evaluates how the system was implemented, whether the procedures followed standard operational guidelines and initial plans, and whether the system aligns with organizational objectives and stakeholder needs.
4. **Product Evaluation**: Evaluates the outcomes of the system's implementation, focusing on how well the management information system contributes to achieving organizational goals. Are the system features and outputs meeting stakeholder expectations and needs?
5. **Outcome Evaluation**: Evaluates the impact of the system's implementation on improving organizational performance, work efficiency, and stakeholder satisfaction, both internally and externally.

The following is the evaluation process diagram used, with each component of the CIPPO evaluation model explained as follows:

## Results And Discussion

PT Indo Emkay Abadi (EMKAY) is a vape industry company with a mission to help consumers transition from conventional smoking to vaping, ensuring equitable product distribution across Indonesia, and enhancing product quality through modern technology. EMKAY envisions becoming a global leader in the vape industry and producing the best e-liquid. The company is committed to innovation, quality, and contributing to national and international development.

### Company History of EMKAY

1. **2015**: EMKAY was founded, launching its e-liquid brand.
2. **2016**: Began operations at its first production facility.
3. **2017**: Established a distribution company for retail sales.
4. **2018**: Became the first company in Indonesia to obtain an NPPBKC, legalizing the vape industry.

5. **2019**: Started importing raw materials; ranked among the top 3 taxpayers in HPTL excise duty.
6. **2020**: Ranked No. 1 in e-liquid sales in South Korea.
7. **2021**: Opened a new high-capacity production facility.
8. **2022**: Introduced QR Tracking and an online store.
9. **2023**: Launched pod devices and obtained ISO 9001:2015 certification.

EMKAY is committed to helping millions in Indonesia quit smoking by offering high-quality, technology-based products. The company emphasizes creating flavorful e-liquids, delivering the best vaping experience, and promoting healthier lifestyles.

In 2022, the implementation of **QR Tracking and an online store** marked a significant technological advancement. QR Tracking enhanced product distribution efficiency and transparency by allowing verification of product authenticity, monitoring distribution channels, and improving user experience. The online store facilitated direct purchases via an e-commerce platform, boosting customer loyalty through specialized programs. These systems were integrated into the **Management Information System (MIS)**, optimizing data management, distribution processes, and transactions

**Key Features of the Emkay Website**

1. **Account Registration**: Users verify their age (21+), register, and confirm via OTP sent through WhatsApp or email.
2. **Login**: Access accounts using email/phone and password.
3. **Product Purchases**: Add products to the cart, proceed to checkout, and select payment and delivery options.
4. **Redeem Points**: Scan QR codes to add loyalty points.
5. **Notifications**: Receive updates on orders, promotions, and discounts.
6. **Wishlist**: Save favorite products for future purchases.
7. **Account Management**: Update profiles, addresses, and order history.
8. **Support**: Access live AI chat or contact customer service for assistance.

**Findings**

**Context**

Respondents from PT Indo Emkay Abadi, primarily managers with 1-3 years of experience, highlighted that MIS supports operational efficiency and strategic decision-making. The system, integral to the company's objectives, supports vape product distribution and assists smokers in transitioning to healthier lifestyles through product information, QR code-based loyalty systems, and online purchasing services.

**Input**

1. **Technology**: QR Tracking System, online store features, and integrated payment systems.
2. **Human Resources**: IT team, customer service, and distribution staff.
3. **User Data**: Account registration, transactions, and loyalty history.

The MIS includes **Executive Information System (EIS) and Decision Support System (DSS)** components. The website integrates DSS and EIS to enhance decision-making, facilitate transactions, and optimize distribution. The QR Tracking feature promotes transparency, aiding strategic decisions in distribution and marketing.#

**Process**

1. **Implementation Steps**: Account registration, product purchasing, loyalty point redemption, and distribution management via QR Tracking.
2. **Challenges**: Internal communication and staff adaptation to new technology.

Despite challenges, the system aligns with company needs, achieving a suitability score of 5 from respondents.

**Product**

1. **Key Deliverables**: Online purchasing services, loyalty point redemption, transparent distribution, and product information access.
2. **Impact**: Increased management efficiency (evaluation score of 4) and high user satisfaction (score of 4). However, some initial goals remain under development.

**Outcome**

1. **Operational Efficiency**: Enhanced customer experience and improved trust through technology and product legality.

2. **Strategic Impact**: Respondents rated the system's contribution to decision-making and productivity on a scale of 4, indicating significant improvements.

Future development should focus on integrating Artificial Intelligence (AI) features to enhance operational sophistication further.

**Conclusions**

The deployment of the Management Information System (MIS) at PT Indo Emkay Abadi has proven effective in enhancing operational efficiency and stakeholder satisfaction. However, certain areas still require improvement, such as user training and system interoperability.

**Recommendations**

1. **Enhance User Training**: Provide intensive training sessions for MIS users to ensure comprehensive understanding and optimal utilization of the system's features.
2. **Improve System Interoperability**: Strengthen integration between the MIS and other systems within the company to ensure seamless data flow and process coordination.
3. **Adopt AI Technology**: Incorporate AI-based technologies to further automate business processes, enabling more efficient and innovative operational practices.

**References**

ESA Unggul University. (n.d.). Modul Kuliah Online 12-Sistem Informasi Manajemen. Diakses 20 Oktober 2023, dari https://lms-paralel.esaunggul.ac.id/pluginfile.php

Emkay. (n.d.). *Home*. Retrieved November 30, 2024, from https://emkay.id/

Kusuma, A, et al. (2024). Evaluasi Implementasi Sistem Informasi Manajemen di Perusahaan Start-Up Teknologi. Retrived from https://jurnalmahasiswa.com/index.php/jriin

Maharani, K. (2023). *Sistem Informasi Menjadi Tantangan Manajemen. Sistem Informasi Menjadi Tantangan Manajemen*.

Muntiarti, T., Ernawati, & Indriyanto, B. (2021). Evaluasi Program Tahfidz Al-Qur'an Buahati Jakarta. *Jurnal Penelitian dan Penilaian Pendidikan*. 3(1). 1-16.

Nusamandiri University. (n.d.). *Modul Sistem Informasi Manajemen S1*. Retrieved October 20th 2023, from https://repository.nusamandiri.ac.id/repo/files/235767/download/Modul_Sistem_Informasi_Manajemen-S1.pdf

O'Brien, J. A., & Marakas, G. M. (2011). *Introduction to Information Systems*. McGraw-Hill.

Oktaviyana, A. (2023). Analisis Sistem Informasi Manajemen. Retrieved from https://circle-archive.com/index.php/carc/article/download/25/24

Pustaka Universitas Terbuka. (n.d.). *Modul EKMA4443403*. Retrieved October 20th 2023, from https://pustaka.ut.ac.id/reader/index.php?modul=EKMA443403

Sari, M., M. (2016). *Evaluasi Sistem Informasi Manajemen Rumah Sakit (SIMRS) Dengan Kerangka Hot-Fit.* Retrieved from.https://is.its.ac.id/

Universitas Islam Negeri Sunan Gunung Djati Bandung. (n.d.). *Buku Sistem Informasi Manajemen*. Retrieved October 20th 2023, from https://etheses.uinsgd.ac.id/8790/1/Buku%20Sistem%20Informasi%20Manajemen.pdf

Universitas Pendidikan Indonesia. (n.d.). *Modul Perkuliahan SIM*. Retrieved October 20th 2023, from http://file.upi.edu/Direktori/FPEB/PRODI._MANAJEMEN_FPEB/19720715200312-10. CHAIRUL_FURQON/Modul_perkuliahan_SIM.pdf

Winarto, W., W., A. (2021) *Analisis Review Penggunaan Sistem Informasi pada PT Pertamina. Analisis Review Penggunaan Sistem Informasi*. Retrieved from https://bios.sinergis.org/bios.