Eduvest – Journal of Universal Studies
Volume 5 Number 8, August, 2025
p- ISSN 2775-3735- e-ISSN 2775-3727

Evaluation of IT System Operational Services using The ITIL Framework in the Service Desk Domain (A Case Study of PT Erafone Dotcom)

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ABSTRACT

PT Erafone dotcom is one of the mobile phone and tablet retailer companies in Indonesia from various well-known brands. PT Erafone dotcom uses the service desk as an after-sales support system service for customers or users in the smooth transaction process. The current problem with service desk services is the slow response to handling and resolving obstacles. Evaluation is needed to be able to improve operational services. The Information Technology Infrastructure Library (ITIL) V4 will be used to evaluate service desk services in IT Operational at PT Erafone Dotcom. The purpose of this study is to evaluate IT Support in operational services using the ITIL V4 framework with 2 practices in the domain of General Management Practice and 5 practices in the domain of Service Management Practice. The results of this study are that the level of service in IT Operational and the level of capability are at level 3 (Defined), which means that IT Operational support to users has run optimally referring to management practice procedures and response to incidents. To increase the value of IT Operational support from the maturity level to match expectations and can improve management. The recommendation for improvement is that even though it is at level 3, there is still a gap in the practices used so that it is necessary to improve the recording of incidents and problems that occur, so that they can be analyzed and identified to help handle and prevent the recurrence of incidents and problems.

KEYWORDS *service desk; practice; General Management Practice; Service Management Practice; user*

INTRODUCTION

PT Erafone Dotcom is a leading mobile phone and tablet retail company in Indonesia, where the service desk plays a critical role in efficiently resolving customer transaction issues. The IT help desk system has become indispensable for organizations heavily reliant on IT services, as highlighted by Al-Hawari and Barham (2021), who show that ML-enabled help desks reduce resolution time and improve user satisfaction—supporting continuity of operations. Speed in responding to service desk requests is crucial for customer retention; evidence from digital platforms indicates that customer service quality and recovery speed strengthen trust and repurchase intention (El Shiffa et al., 2022; Istanbulluoglu & Sakman, 2024; Wei et al., 2023). In online service contexts, effective failure handling and rapid recovery shape relationship quality and loyalty (Ozuem et al., 2021), while intelligent frontline automation (e.g., chatbots) can raise satisfaction when used appropriately, complementing human agents in time-sensitive interactions (Ruan et al., 2022). Finally, maintaining swift incident response within an ITIL/BCM mindset underpins business continuity—especially in disruption-prone environments (Margherita & Heikkilä, 2021).

In an organization, there is usually a division or section responsible for handling IT infrastructure (Almklov et al., 2012). At times, the availability of IT infrastructure has not been maximized, and the suitability of the infrastructure with business interests has not been aligned, resulting in an IT system that does not run optimally (Rahimi et al., 2016). To avoid

incompatibilities between business processes and the availability of IT infrastructure, a reliable method of accurate management is required; research shows that adopting structured IT service management (ITSM) improves alignment and observable outcomes (MacLean et al., 2023; Shrestha et al., 2020). One of the approaches that has developed significantly and can be adapted as a Service Request Management framework is an IT Infrastructure Library (ITIL) practice; studies note both its widespread use and the need for process-oriented implementation guidance (Orta et al., 2019; Gunawan et al., 2024). Moreover, effective IT governance at the board level strengthens the integration of IT with corporate objectives, supporting the fit between business processes and IT services (Caluwe et al., 2024; Lin et al., 2023).

Another study stated that implementing the ITIL framework can provide several benefits: enabling the strategic goals of an organization to be achieved, ensuring a better financial plan in terms of efficiency and effectiveness, increasing customer satisfaction in using IT, and improving the image of an organization in the eyes of customers (Alresheedi et al., 2018; Marrone & Kolbe, 2017). With the existence of standards based on the Service Level Agreement (SLA), IT Support operations in providing services to service desk users become more consistent (Tavares et al., 2020). Through incident management and service request management, business operations can return to normal as quickly as possible, with target recovery times outlined within SLA limits (Bashir et al., 2023; Bouaoula et al., 2019).

Despite these advantages, PT Erafone Dotcom's *service desk* encounters persistent issues, such as delayed responses and request backlogs during peak hours, which hinder SLA compliance. This study builds on previous research by evaluating IT operational services using the *ITIL V4* framework, focusing on General Management and Service Management practices. By addressing gaps in incident documentation, problem analysis, and process automation, this research contributes novel insights into optimizing *service desk* performance in retail environments — an area less explored in existing literature.

Based on the background described above, several key issues emerge that need to be addressed. First, during peak operating hours, the order process across all applications experiences a buildup of requests, leading to unmet SLAs. This congestion disrupts service efficiency and customer satisfaction. Second, there is a need to systematically identify and analyze the underlying problems within current *service desk* operations to pinpoint areas of inefficiency. Third, improving the quality of *service desk* support in IT Operations at PT Erafone Dotcom is essential to ensure smoother operations and higher user satisfaction. Addressing these challenges will require a comprehensive evaluation and targeted interventions to enhance service delivery and operational performance.

Based on the formulation of the above problem, the objectives of this research are as follows: to carry out a review of the handling of *incident management* and *service request management* in the *service desk* domain and address potential weaknesses in the process by referring to *ITIL*; to evaluate the *service desk* services currently in place using the *ITIL V4* framework approach with two practices in the General Management Practice domain and five practices in the Service Management Practice domain; and to submit recommendations for improvement to management to enhance the quality of *service desk* services at PT Erafone Dotcom.

The benefits obtained from this research are as follows: Theoretically, it is expected to contribute to the development and implementation of knowledge, particularly in the field of IT

Operations. For the company, this research is expected to assist the management of PT Erafone Dotcom — especially the IT Operational TechDev division — by providing: (1) an overview and evaluation of the current condition of *service desk* service quality, and (2) recommendations for *service desk* service frameworks in accordance with *ITIL V4* best practices to improve the quality of IT services in line with the company's vision and goals. For future research, this study is expected to serve as a bridge for research development on *Continual Service Improvement* with broader coverage areas in the future.

METHOD

This study uses a qualitative approach with a case study method to evaluate *service desk* services at PT Erafone Dotcom based on the *ITIL V4* framework.

Literature Study

Literature study activities consist of reviewing various sources that have a correlation with the formulation of the problems to be addressed in this study. This process begins with the collection of all existing and relevant literature to support the research and connect it with the identified variables. The literature collected may include books, papers, journals, or relevant articles. The obtained literature is then used as a basis and guideline in conducting the research activities.

Table 1. Categorization of Literature Sources

No.	Journal Title	The method that used	Information	Conclusion
1.	Comparative Study Between the Integration of ITIL and ISO / IEC 27001 with the Integration of COBIT and ISO / IEC 27001	Study literature used as a research method.	- This paper provides a comparison between ITIL and ISO/IEC 27001 integration with COBIT and ISO/IEC 27001 integration. - The results of the research can be a reference for organizations considering the integration of such information security standards.	- Compariso n between ITIL and ISO/IEC 27001 integration with COBIT and ISO/IEC 27001 integration - References for organizations considering the integration of information security standards
2.	Evaluation of Governance and Management of Information Technology Services Using Cobit 2019 and ITIL 4	- COBIT 2019 - ITIL 4	- IT proficiency levels range from 0 to 3. - Service satisfaction is measured in four quadrants.	- This paper provides recommendations for improving IT services based on ITIL 4 and SWOT analysis. - This paper evaluates the governance and management of services using COBIT 2019.

3.	Management of IT Services in the Field of Pre-Hospital Emergency Management with the Combined Approach of COBIT Maturity Model and ITIL Framework: A Conceptual Model	- This paper proposes a combined approach of the COBIT Maturity Model and the ITIL Framework.	- Propose a maturity model of ITIL & COBIT implementation in pre-hospital emergency management. - Highlight the usefulness of considering the application of ITIL & COBIT in this area.	- Developme nt of an IT maturity model for pre-hospital emergency management. - Proposal for the implementation of ITIL & COBIT in emergency management.
4.	It governance audit at the kampar regency library and archives department using cobit 2019 and itil 4	- COBIT 2019 - ITIL 4	Assessment results: 2 criteria in quadrant A, 1 criterion in quadrant B, 2 criteria in quadrant C, and 3 criteria in quadrant D.	- Eight process domains were identified with different levels of achievement - Capability level assessment using Servqual Model and Importance Performance Analysis
5.	IT Service Management Using COBIT Enablers: The Case of Brazilian National Institute of Cancer	- Qualitati ve research through interviews - Critical analysis of documents on Strategic Planning	- ITIL implementation involves changing culture and requires senior management support. - ITIL and COBIT practices are both relevant to improve governance lifecycle management.	- ITIL and COBIT practices are both relevant to improve governance lifecycle management. - Resistance to formal methodologies due to organizational culture and server behavior.
6.	Assessment of capability level and IT governance improvement based on COBIT and ITIL framework at communication center ministry of foreign affairs	- ITIL and COBIT frameworks are used for IT service improvement. - Qualitati ve approaches and case study methods are applied.	- ITIL and COBIT frameworks are implemented to improve the quality of IT services. - COBIT provides a better governance structure and supports the strategic interests of IT.	- Analysis of 26 ITIL processes and evaluation of 18 COBIT IT processes. - Key Performance Indicator (KPI) recommendations for Puskom. - COBIT focuses more on control and governance, while ITIL provides best practices for effective service

				management capabilities.
7.	IT Governance: Comparison between COBIT and ITIL	This paper analyzes and compares the ITIL and COBIT frameworks.	- This paper suggests the implementation of Information Technology Governance (GTI) in the Tribunal de Justica de Santa Catarina (TJSC) to improve services. - This paper analyzes and compares the ITIL and COBIT frameworks to evaluate their suitability for the case.	This paper suggests that using the COBIT and ITIL frameworks simultaneously is more effective than implementing them individually. It is stated that COBIT focuses on planning while ITIL focuses on the operationalization of IT services.
8.	The Significant of Cobit Mapping Business Goal 12 and IT Goal 19 (Case Study: Stikom Surabaya)	- Structural Equation Modelling (SEM) - Generalized Structured Component Analysis (GSCA)	- COBIT mapping is not significant in academic administration case studies. - The paradox of IT productivity can be prevented by analyzing IT processes.	The results of the study with the SEM approach showed that COBIT mapping was not significant in the case study of academic administration.
9.	Improving ITIL Strategic Alignment Approach Using COBIT Framework	- Mapping COBIT 4.1 to ITIL v3 to identify the control objectives covered by the ITIL process	- COBIT and ITIL can be combined for IT governance - Proposed practices to improve ITIL strategic alignment	- Mapping of COBIT 4.1 to ITIL v3 to identify the control objectives covered by the ITIL process. - Identify opportunities to improve ITIL strategic alignment activities. - Propose practices to improve the ITIL v3 strategic alignment approach
10.	The importance of success and the benefits of actions taken: a study of the telecommunications business	- Exploratory case studies - Qualitative data analysis	- Adoption of ITIL can improve operational and managerial processes - ITIL adoption improves alignment between IT and business needs	- Identification of Critical Success Factors (CSFs) for IT governance models - ITIL adoption leads to improvements in operational and managerial processes
11.	A new framework for bridging the gap	- Comparison of COBIT	- ITIL Security Management is not fully	- ITIL Security

	between IT Service Management and IT Governance from a security perspective	DS5 requirements with ITIL Security Management measures - Proposed additional framework for integration into ITIL	compliant with COBIT DS5. - Additional frameworks can be integrated into ITIL to achieve compliance with COBIT DS5.	Management cannot fully comply with COBIT DS5. - Additional frameworks can be integrated into ITIL for compliance.
12.	Audit of information technology services of the lampung tribun using the itil (information technology infrastructure library) framework	- Audit with ITIL framework - Interviews, observations, and questionnaires for data collection	- The maturity level of Tribun Lampung in information technology services in the domain of service operations is 3.1 (Defined). - The IT Division of the Lampung Tribune has not met the standard SOP criteria.	- The maturity level of Tribun Lampung in information technology services in the domain of service operations is 3.1 (Defined). - The IT Division of the Lampung Tribune has not met the standard SOP criteria.
13.	ITIL v3 Framework Application to Design Information Technology Incident Management Governance	- Assessment of maturity level using interviews and questionnaires - Design IT incident management governance documents based on ITIL v3 framework	- 15 of the 42 IT incident management processes have not reached the desired condition. - The IT incident management governance document is designed based on the ITIL v3 framework.	- 15 of the 42 IT incident management processes have not reached the desired condition. - The IT incident management governance document is designed based on the ITIL v3 framework.
14.	An overlapless incident management maturity model for multi-framework assessment (ITIL, COBIT, CMMI-SVC)	- Design Science Research (DSR) - Literature review, cross-frame analysis, and semi-structured interviews	- The proposed model of maturity is seen as complete and useful. - Some organizations are unaware of their true level of IM maturity.	Design Science Research (DSR) focuses on developing incident management maturity models that incorporate the practices of various IT frameworks, including ITIL and COBIT.
15.	A Study on the ITIL Management Model Based on the IT Governance for	- This paper uses the ITIL management	- IT governance requires a standardized organizational structure, leadership, and processes.	- This paper presents research on ITIL management

	Public Sector	model for IT governance. - It also uses measures for ITSM, PMS, and ICT service-level surveys.	- The ITIL management model can be used as a guideline in establishing IT governance.	models for IT governance. - This paper provides guidelines for building a theoretical foundation for ITIL management.
16.	Development of information technology (it) governance models in higher education organizations using cobit 4.1 domain po and ai	- COBIT 4.0 is used as an IT Governance framework. - Risk assessments are used to determine the importance of IT processes.	- An institution's IT maturity level is somewhere between start-ups and repeatable. - IT process improvement recommendations are given based on maturity level.	- Proposed IT Governance model for Higher Education organizations - Recommendations for IT process improvement based on maturity level
17.	COBIT as a Framework for Enterprise Governance of IT	COBIT	- COBIT is a practical and internationally recognized framework. - It provides controls and processes for IT governance.	- COBIT is an internationally recognized industry framework for enterprise IT governance. - It establishes control over information technology and governs it around IT-related processes.
18.	Audit of IT Governance Based on COBIT 5 Assessments: A Case Study	- Questionnaires are distributed to management and users - Field observations were carried out with a survey approach	- This paper concludes that the implementation of IT governance is a challenge for organizations. - The paper also concludes that COBIT 5 is an effective framework for auditing IT systems.	- This paper provides an overview of the performance of information technology governance. - This paper highlights the use of the COBIT 5 framework to audit IT systems.
19.	COBIT and its utilization: a framework from the literature	- Objective ontology and positivist epistemology - Descriptive, quantitative approaches and content analysis methods	- The majority of COBIT publications focus on the private sector. - Large organizations are more likely to implement COBIT.	- 62 of the 83 publications were classified by the researchers. - The majority of publications (93%) are practitioner-based.
20.	Information technology services	- Control Objectives for	- 6 Processes of achieving level 1 abilities	COBIT 2019 to assess the level of

management audit using the cobit and itil framework	Information and Related Technologies (COBIT 2019) - Information Technology Infrastructure Library (ITIL 4) domain service management	- 19 Processes Not Meeting Capabilities	IT process capability and ITIL 4 for service management recommendations.

Source: The author's analysis is based on literature studies from various journals and articles relevant to this research

Based on the literature review that has been conducted between *COBIT* and *ITIL* on IT services, *ITIL* provides the guidance needed by organizations to overcome new service management challenges and harness the potential of the latest information technology. It is designed to ensure a flexible, coordinated, and integrated system for the effective governance and management of services that support information technology.

a. ITIL – More focused on the IT service lifecycle and meeting user needs, with an emphasis on the more effective delivery and management of IT services. It is more suitable for organizations that aim to improve IT service quality and *service management*.
b. COBIT – Emphasizes comprehensive IT control, compliance, and governance, providing detailed guidance to control risk and achieve compliance. It is more suitable for organizations with broader IT control and governance needs.

Therefore, it can be concluded that IT services in the *service desk* domain are more suitably managed using the *ITIL* framework, as it enhances IT service delivery and *service management*.

Data Collection

a. Primary Data – Primary data in this study was obtained through observation and interviews on the procedures and work processes of PT Erafone Dotcom's *service desk* in handling *incident* reports. Observations were carried out on the operational activities of the *service desk* currently in place, as well as on reporting data stored in the *service desk* application. This data was then processed to obtain the necessary information related to the research objectives. Interviews were conducted through a brief question-and-answer session with two employees of PT Erafone Dotcom — the Head of the IT Operational TechDev division and the *service desk* Manager. These interviews aimed to obtain additional information that may not have been captured during the observation phase.
b. Secondary Data – Secondary data in this study was obtained from the company's website and other internal sources at PT Erafone Dotcom. In addition, further data and information were sourced from literature studies on books, articles, journals, and other references related to this research. A questionnaire was not used as a data collection tool, given that this study is not intended to test the validity or reliability of variables for the purpose of hypothesis testing.

Data Processing and Analysis

The stage of data processing and analysis is the main phase of this research. The *ITIL V4* best practice methodology will be used as a guideline in providing recommendations for

the improvement and development of IT service management. The *ITIL V4* General Management Practices utilized include *Architecture Management* and *Continual Improvement*, while the Service Management Practices applied are *Incident Management*, *Problem Management*, *Service Desk*, *Service Level Management*, and *Service Request Management*.

RESULT AND DISCUSSION

Research Data

This data collection stage is carried out to obtain data and information needed in research related to IT operational services at the service desk at PT Erafone Dotcom. Before conducting an assessment by documenting the data obtained from the observation results, namely about the overview of IT operations and the running system of IT operational services at PT Erafone Dotcom.

1) Operational IT Overview

To meet the needs in IT operational services at the service desk, IT operations are responsible for every request, both incident and request addressed to the tech dev division. PT Erafone Dotcom has a service desk service as a form of after-sales service to ensure that IT services at customers can continue to run well. The IT operations team will receive and handle the IT ticket reports that occur at the customer until it is completed. The ticket report in question is the occurrence of a disturbance or problem that results in the disruption of IT services at the customer. Therefore, service desk services play an important and valuable role for companies and can make a significant contribution to customer satisfaction. The IT operations team in the Tech Dev division is led by a manager and consists of 6 staff members who are on duty until store closing hours including Sundays and public holidays. The IT operational team is required to always be on standby in every receipt and handling of ticket reports that occur at PT Erafone Dotcom customers.

The mechanism for receiving reports is carried out through a ticket sent to the IT operational team. Each partisan has an account to be able to view the ticket of the whistleblower. Whistleblowers can send tickets from other divisions such as the ekom operational team, product team, CRM team, L1 IT operations team directly to the IT operations team or from PT Erafone Dotcom employees who receive reports from customers related to the transaction process. All incoming ticket reports are documented on the service desk application in the form of IT report tickets. This documentation is needed to find out when the ticket was made, what handling activities were carried out, the status of the ticket, who is the technician on duty, and when the ticket was closed.

The handling of each IT ticket report will be adjusted to the priority of each ticket contained in the form of a Service Level Agreement (SLA).

The IT operational team according to the direction of PT Erafone Dotcom's management has four SLA levels, namely:

a. Critical

The critical level has the following SLA provisions:

1) Maximum response time : 0.083 hours or 5 minutes

2) Maximum resolution time : 1 hour

b. High

High level has the following SLA provisions:

1) Maximum response time : 0.25 hours or 15 minutes
2) Maximum resolution time : 1 hour

c. Medium

The medium level has the following SLA provisions:

1) Maximum response time : 0.5 hours or 30 minutes
2) Maximum resolution time : 2 hours

d. Low

The low level has the following SLA requirements:

1) Maximum response time : 0.75 hours or 45 minutes
2) Maximum resolution time : 3 hours

There are two categories of systems that are currently running in IT operations, namely *incidents* and *service requests*.

1. Incident Management

Incident It can be an error or an event that causes the service to malfunction. The incident was not planned and impacted the productivity of employees, departments, or the entire organization. This also has an impact on the quality of service. Incident management is carried out to restore service in the shortest possible time. So that there are no business losses and organizational productivity is not disrupted. This ensures that the quality of service is provided and the level of customer satisfaction is maintained.

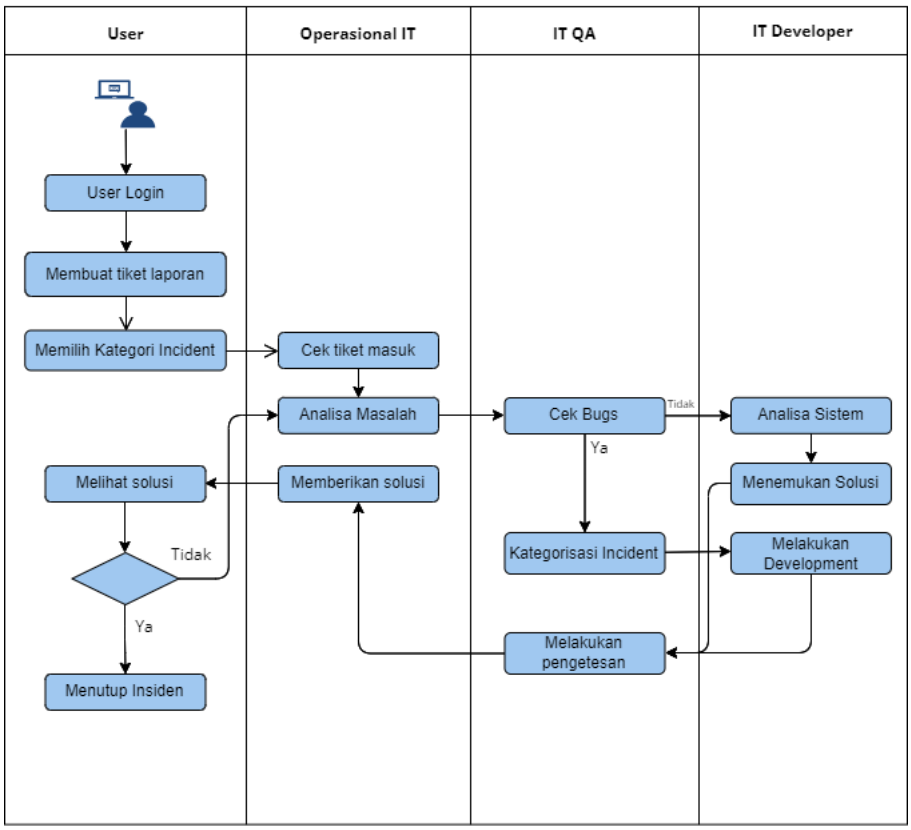
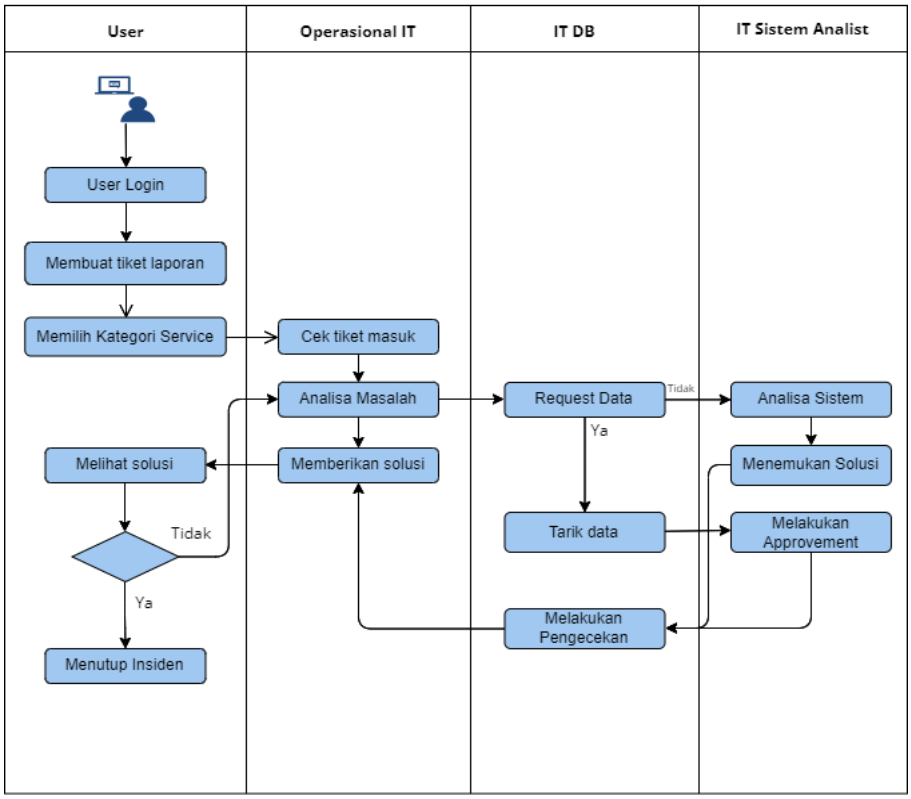


Figure 1. Categories of Incident Reports in 2023

Source: PT Erafone Dotcom's internal data, processed by the author (2023)

2. Service Requests

Service request relates to the problem faced by the user and is an official request from the user to provide a solution or information regarding the problem. The purpose of the service request is to support the quality to the user in a user-friendly manner.



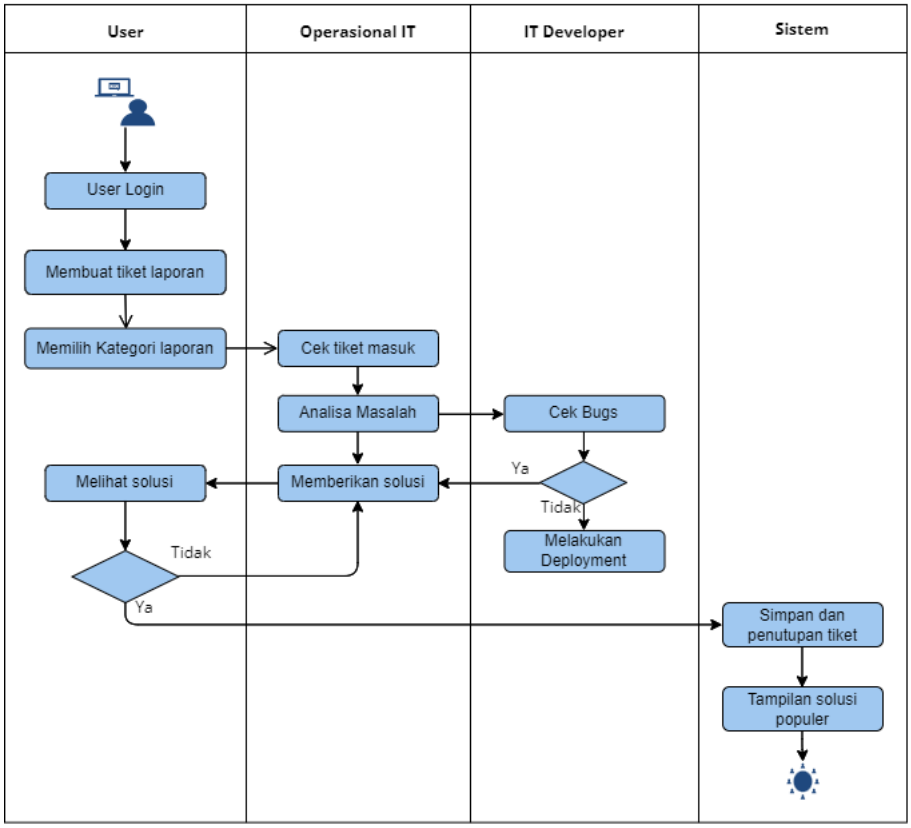


Figure 2. Categories of Service Requests in 2023
Source: PT Erafone Dotcom's internal data, processed by the author (2023)

4) Problems in Service Desk Services

The results of observation, interviews, and questionnaire analysis of 100 respondents identified several problems that hinder the effectiveness of Service Desk services at PT Erafone Dotcom. These problems include technical, procedural, and understanding of ITIL service concepts. The problems found are as follows:

1. **Incident Ticket Category Placement Errors**
   There are still frequent errors in categorizing reports when creating tickets. Some users don't understand the difference between **an incident** and **a service request**, so handling often doesn't match the flow or priority.
2. **Submission of Reports Through Unofficial Channels Not**
   all incidents are directly reported by users to the IT operations team. Many convey obstacles to **their superiors or managers** first. Due to manager busyness, reports are often delayed and not forwarded directly to the IT operations team, slowing down the initial response.
3. **Escalation Delays to Technical Support Escalation**
   incidents that require follow-up by the technical support team are not processed immediately because they are waiting for a deployment schedule or waiting for a queue to check bugs by other teams, such as **Quality Assurance (QA).** This creates a bottleneck in resolving the incident.
4. **Lack of ITIL-Related User Awareness and Training**

There is a lack of understanding among end-users and some support teams regarding the principles and workflows of **ITIL V4-based** Service Desk. This causes the process not to be run according to the standards it should.

5. **Not Optimal in Configuring Service Desks According to Needs**
   The implementation of the Service Desk system has not been fully configured or adjusted to business and operational needs in the field. Some important features have not been utilized optimally.
6. **Demand Buildup During High Operating Hours During**
   peak hours, especially when all applications are used for order processing, there is a buildup of **requests and incidents**. This condition causes the **Service Level Agreement (SLA)** to not be achieved due to the limited handling capacity of the support team.

Problem Impact Analysis:

a. Service response is inconsistent and hampered.
b. The performance of the Service Desk does not reflect a stable level of capability.
c. SLAs and user satisfaction are negatively impacted.
d. Opportunities for continuous improvement were not identified because documentation and escalation were not optimal.

The obstacles and problems that have been described previously have a direct influence on the quality of Service Desk services at PT Erafone Dotcom. Inaccuracies in ticket handling, both in terms of categorization, reporting paths, and escalation delays, cause not all tickets to be handled in accordance with the provisions of the applicable standard operating procedures (SOPs).

Responses from customers or service users to the performance of the IT Service Desk operational team also showed mixed results. In general, the majority of customers expressed **satisfaction with the service** and ticket settlement actions carried out. However, there are also customers who express **dissatisfaction** through complaints, especially regarding **the slow response** and **long ticket settlement time**, both for **the incident** category and **service request**.

For the management of PT Erafone Dotcom, every complaint from customers is considered a **crucial** thing and must be found immediately. This is important because **the level of customer satisfaction (Customer Satisfaction Index)** is one of the main indicators in assessing the effectiveness and quality of IT services provided. A decrease in the satisfaction index can have an impact on the perception of the overall performance of the IT unit and even affect the productivity of the user's work unit.

4) Ticket Report Statistics Data for 2023

In this study, the data used is **data on IT service ticket reports** from **the period January 2023 to December 2023**. The tickets collected include **the incident** and **service request** categories with a total of **9356 cases** over one year.

Table 2. Number of Ticket Reports per Month in 2023

Created Time	Total Ticket	Response Time < 30 mins	Target	Percentage
Jan	1125	650	90%	58%
Feb	964	703	90%	73%
Mar	714	464	90%	65%

Apr	586	461	90%	79%
May	733	383	90%	52%
Jun	520	474	90%	91%
Jul	799	251	90%	31%
Aug	876	525	90%	60%
Sep	861	400	90%	46%
Oct	837	370	90%	44%
Nov	738	472	90%	64%
Dec	783	629	90%	80%
Grand Total	**9536**	**5782**	**90%**	**61%**

Source: PT Erafone Dotcom IT service ticket report data for the January–December 2023 period, processed by the author

From the analysis of the report data, it is known that the **maintenance** category is the highest report category with a total of **573 cases**, or 68**% of the total incident reports**. This shows that the maintenance aspects of systems and infrastructure require special attention from the operational IT team.

Analysis of Findings:

a. The high number of reports in January indicated a high service load at the beginning of the year, which could be caused by the annual operational reset.
b. The low number of reports in June can be attributed to long holidays or a decrease in operational activity.
c. The dominance of *the maintenance* category indicates the need for improvements in proactive maintenance management and system monitoring.

Evaluation Results

The evaluation data in this study was obtained through the following methods:

1. **Structured Interviews**
   Interviews were conducted with key informants from the IT Operational team at PT Erafone Dotcom, including IT Support supervisors, *Service Desk* staff, and personnel involved in handling incidents and service requests. The interview questions are structured based on indicators from each practice in ITIL V4.
2. **Capability Assessment Questionnaire**
   The questionnaire is prepared based on the maturity level assessment model (1–5) with reference to the ITIL V4 Capability Model guidelines. Respondents filled out a questionnaire for each practice used in the IT operational environment.
3. **Internal Documentation**
   The documents reviewed include:
   a. Incident log
   b. Service *request record*
   c. Change request document
   d. Standard work procedures (SOPs)
   e. Information security policy and internal training
4. **Direct Observation**

Observations are made of the daily work process in the *Service Desk environment*, including incident handling interactions, service requests, as well as documentation and escalation carried out by the IT Support team.

5. **Literature and Reference Frameworks**
   The evaluation also refers to the official ITIL V4 documentation from Axelos as the main source of reference in determining the indicators and classification of the maturity level of each practice.

Evaluation of IT Support services at PT Erafone Dotcom based on the ITIL V4 framework. This data is in the form of an evaluation recapitulation table for each *practice*, including domains, evaluated indicators, capability scores, and a brief description of the evaluation results.

Table 3. Recapitulation of IT Support Services Evaluation at PT Erafone Dotcom Based on ITIL V4 Framework

Yes	Practice ITIL V4	Aspects assessed	Grades (1-5)	Evaluation Notes
1	Continual Improvement	There is a periodic repair process	3	There are improvement initiatives, but they have not been thoroughly documented
		Data-driven and feedback-driven improvements	2	Feedback has not been systematically collected
2	Information Security Management	Access rights management	3	Management has been carried out, but audits have not been routine
		Security documentation and controls	2	There are no formal SOPs or documented safety logs
3	Incident Management	Incident documentation procedure	2	Not all incidents are recorded in the system
		Incident response speed	3	Inconsistent response times, depending on the case
4	Problem Management	Root Cause Analysis	1	There is no formal mechanism for RCA
		Known Error Database Available	1	There is no common error database yet
5	Service Request Management	Handling routine service requests	4	That's good, but it's not yet limited by formal SLAs
		Service request documentation	3	It is still done manually by some staff
6	Service Desk	Function as the first point of contact	4	Functions as a frontline, but the ticketing system is not optimal
		Knowledge base or solution guide available	2	No formal knowledge base available
7	Monitoring and Event Management	Automatic monitoring	2	Still manual, no automatic alert
		Response to disruption/event	3	Responsive, but undocumented

Source: Results of interviews, questionnaires, and direct observations by the author (2023)

Based on the assessment of the seven practices, the results were obtained that in general, **the IT Operational service capabilities of PT Erafone Dotcom are at Level 3 (Defined).** This indicates that the service processes have:

a. Have documented work procedures.
b. Implemented consistently by the IT Support team.
c. Responsive to incidents, although there is still room for improvement in data management and documentation.

This condition illustrates that the company has implemented service management practices in a structured manner and has gone beyond the reactive stage. However, these processes have not been fully quantitatively measured or systematically analyzed for continuous improvement as demanded at Level 4 (Managed) or Level 5 (Optimizing).

1) Gap Analysis and Root of the Problem

Even though it is at Level 3, the results of the evaluation show that there are still **gaps in the implementation of several practices**, especially in:

a. **Problem Management**:
   There is no formal process for root *cause analysis* of recurring incidents. This hinders the prevention process against similar incidents in the future.
b. **Incident Management & Service Desk**:
   Although the recording has been done, it has not been fully documented in detail or associated with *problem records*, making it difficult to analyze historical data for prediction or mitigation.

This gap shows the need for improvement in terms of:

a. More complete and structured documentation of incidents and problems.
b. Integration of service logging systems that support incident analytics.
c. Training of the support team in conducting effective incident and escalation analysis.

Table 4. Gap Analysis of IT Service Desk Service Practices Based on ITIL V4 Framework at PT Erafone Dotcom

Yes	Practice	Ideal Conditions (ITIL V4)	Actual Conditions at PT Erafone Dotcom	Gap	The Root of the Problem
1	Continual Improvement	Evaluations are carried out routinely, documented, there is reporting and follow-up	Evaluations are carried out, but not all are systematically followed up or measured	No measurement of overall improvement results	Lack of reporting mechanism for improvement results and management follow-up
2	Information Security Management	Strong policies, regular training, strict access control	Policies are available, but training is only done once/irregularly.	Information security awareness is uneven at all levels of users	Lack of awareness training and lack of refreshment of security programs

3	Incident Management	All incidents are fully recorded, classified, and impact evaluated	Incidents were recorded, but classification and documentation were inconsistent	Documentation is incomplete and does not match incident priorities	There are no detailed SOPs for incident classification and the use of manual reporting systems
4	Problem Management	Root cause is identified, problems are recorded, analysis and prevention are carried out	The problem has not been differentiated from the incident, no analysis of the cause has been carried out	No problem database or formal RCA process	Lack of understanding and habit of doing root cause analysis
5	Service Request Mgmt	Requests are processed quickly, documented, and partially automated	It's in accordance with the SLA, but the approval process is still manual, and not all users understand the path	Automation is not yet available, the approval process is not yet efficient	There is no catalog-based service request system and electronic approval flow
6	Service Desk	Frontline support is responsive, has a knowledge base, and has a self-service channel	It already has a reporting channel, but there is no knowledge base and independent system	There is no self-service portal or information database for users	The focus of the service is still on manual reporting, not yet developing a self-service channel
7	Change Enablement	All changes are recorded, risks are analyzed, there is an approval process	Major changes are noted, but minor changes are not always documented	Documentation of minor changes and risk analysis has not been consistent	There is no policy that requires the recording of all types of changes

Source: Author's analysis based on the evaluation of the ITIL V4 framework and the actual conditions at PT Erafone Dotcom (2023)

CONCLUSION

This research evaluates the capabilities of *IT Support* services at PT Erafone Dotcom using the *ITIL V4* framework, with a focus on seven practices in the domains of *General Management* and *Service Management*. The results of the study indicate that IT Operational services are at Level 3 (*Defined*), meaning that processes have been standardized and implemented consistently. However, there are still gaps in documentation, problem analysis, and automation that hinder optimal performance. To improve service quality and achieve a higher level of maturity (Level 4 or 5), several improvement steps are recommended. First, enhance documentation and *incident management* by implementing a structured system for recording and categorizing incidents, as well as drafting *SOPs* for incident classification and escalation. Second, strengthen *problem management* through the implementation of *Root*

Cause Analysis (RCA) and the creation of a *Known Error Database (KEDB)* to identify recurring issues and increase response efficiency. Third, improve automation and *self-service* by automating routine service requests and developing *self-service* portals equipped with a comprehensive knowledge base. Fourth, provide training and awareness programs for IT staff and end-users regarding *ITIL V4* principles and security policies. Fifth, conduct continuous monitoring and performance measurement using *KPIs* and real-time monitoring tools. By implementing these recommendations, PT Erafone Dotcom can enhance the maturity of its IT services, comply with industry standards, and increase customer satisfaction. Further research could explore the integration of AI-based analytics or the *ITIL V4 Continual Improvement* model for additional optimization.

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