

# Evaluation of Incident Management in University using IT Infrastructure Library Framework

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## ABSTRACT

Supporting the implementation of optimal services is a major need for organizations today. Guaranteed service management and good security is one of the benchmarks. This study aims to measure the level of incident management security at the Manado State University Computer Center. Incident Management is an intrinsic IT process that is visible to both customers and businesses. An organization proactively implements a sound IT service management framework such as ITIL v3 so as to maintain the desired Quality of Service (QoS). Data analysis uses Likert scale calculations and refers to aspects of maturity.

**Keywords:** ITIL, Universitas Negeri Manado, maturity, incident management

## INTRODUCTION

Incidents are a common thing in the IT world. This study will examine the maturity level of the incident management process at the Manado State University Computer Center using the ITIL v3 Framework. ITIL v.3 has been recognized worldwide as a collection of best practices that can be applied in information technology management. In incident management, an incident can be where a service is being interrupted, or when the service has not been interrupted. The main goal in incident management is how to restore services so that they can function normally and can be reused by users as soon as possible.

Whether or not an incident management is certainly influenced by the maturity level of an organization. The use of service and security standards to guide the management of security management is one solution, but organizations have difficulties in understanding the extent to which these standards have been implemented, especially when the organization implements more than one standard. Maintaining an efficient incident management process is one of the important tasks for IT support in the organization. According to the ITIL v3 reference model, the event management process consists of the following steps:

- a. Incident identification: this step is the trigger for the incident management process, starting once an incident occurs and an issue is reported.
- b. Incident Analysis & Classification: begins by recording the incident along with its technical and business description.
- c. Investigation and Diagnosis: This is where incidents are investigated for their causes, impacts and possible solutions.
- d. Resolution and recovery: when a solution to the reported problem is identified and tested, the team can start restoring services again.
- e. Incident closure: the desk service team will ensure that a solution is provided to the user.
- f. Incident Monitoring: the desk service team will monitor the resolution of an incident due to its reliability and efficiency

The main goal of the event management process is to return normal service to end users as soon as possible. In this study, the Manado State University Computer Center became the place of our research.

## METHOD

ITIL (Information Technology Infrastructure Library) is the most widely used ITSM IT Service Management framework in the world today. In this case, the organization should

follow the Phased Model which guides the organization in the implementation of ITIL v3, telling them which processes they should implement first and how far they should follow each process.

The proposed maturity model is more descriptive, detailed, and useful because it is specifically designed for ITIL v3 and contains a comprehensive questionnaire for each ITIL v3 process. This model can be used to assist the gradual implementation of ITIL v3 by assessing the maturity of existing processes and suggesting what should be improved or implemented next.

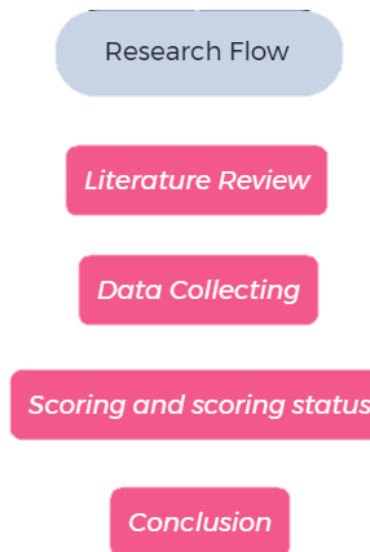


Figure 1. Research Flow

## RESULTS AND DISCUSSION

Measuring the maturity level of incident management, Description of Answer Options in the form of:

- a. Level 1 Initial, adhoc processes and activities, garbled or undefined
- b. Level 2 Repeatable, basic processes and activities are established and there is a level of discipline and compliance
- c. Level 3 Defined, all processes and activities are defined, documented, standardized and integrated together

- d. Level 4 Managed, the process is measured by collecting detailed data about the process, its quality and corrected accordingly
- e. Level 5 Optimizing, continuous process improvement is adopted. The process and activities are mature

Table 1. Value Percentage

NO	JAWABAN	KETERANGAN
1.	0% - 19,99%	Initial
2.	20 - 39,99%	Repeatable
3.	40 - 59,99%	Defined
4.	60 - 79,99%	Managed
5.	80 - 100%	Optimising

**Index formula % = total score / Y x 100**

Y = Skor tertinggi likert x jumlah responden (Angka Tertinggi 5) "Perhatikan Bobot Nilai"

X = Skor terendah likert x jumlah responden (Angka Terendah 1) "Perhatikan Bobot Nilai"

Table 2. Skor Value

NO	PERTANYAAN	PRESENTASE NILAI	KETERANGAN
1.	Kami telah menetapkan sasaran dan tujuan manajemen insiden	66,1%	Managed
2.	Kami telah mendefinisikan lingkup pengelolaan insiden	64,6%	Managed
3.	Kami telah menetapkan kebijakan, prinsip, dan konsep dasar insiden manajemen	63%	Managed
4.	Kami telah mendefinisikan pemicu, input dan keluaran insiden manajemen	63%	Managed
5.	Kami telah mendefinisikan laporan manajemen informasi insiden manajemen	63%	Managed
6.	Hubungan antara manajemen insiden dan manajemen problem dipahami	63,5%	Managed
7.	Laporan manajemen insiden telah diidentifikasi dan diberlakukan	73,8%	Managed
8.	Model insiden didefinisikan	69,2%	Managed

The score is obtained through measurement using a Likert scale adjusted to aspects of maturity. The level of IT service according to the needs of the organization can be evaluated using performance indicators that are calculated from measurements obtained from the IT process itself, whether operated internally or externally. With the specific aim of creating IT-related procedures for the incident management process, organizations should explicitly define the appropriate authoritative capacities with incidents. In other words, organizations need to give particular focus to the relationships that govern IT functions and their alignment with service levels or business needs.

## CONCLUSION

This study aims to measure the maturity level of incident management at Manado State University with the best practices of the ITIL v3 framework. The incident management process is of the highest priority for organizations as it is the primary gateway between IT services and their intended end users. This study provides an overview of the Maturity Level of the incident management process at the Manado State University computer center. The results of the study indicate that the maturity level of incident management is at the level above 3, or already at the Managed level in the maturity level.

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