

INTEGRATED TECHNICAL PROBLEM MANAGEMENT SYSTEM  
(ITPMS)

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To my beloved husband and children

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## ABSTRAK

System Pengurusan Masalah Teknikal Bersepadu (ITPMS) adalah merupakan satu sistem yang di bangukan bagi menggabungkan dua jenis pemprosesan yang melibatkan pengendalian pemprosesan pengurusan masalah. Pemprosesan tersebut adalah pemprosesan automasi sistem sediaada (*legacy system*) dan pemprosesan manual.

ITPMS adalah sistem automasi yang merangkumi fungsi pengendalian pengurusan masalah seperti pemantauan, pengagihan dan pengawalan masalah. Sebagai satu sistem automasi, ITPMS juga berkeupayaan untuk melakukan pengwujudan rekod baru, penghapusan rekod dan juga pengemaskinian rekod. Di samping itu sistem ini juga menyediakan data dan maklumat statistik kepada pihak pengurusan.

## **ABSTRACT**

The Integrated Technical Problem Management System is a system that is designed to integrate the two types of processes involved in the handling of problem management processing. The processing are the automated legacy system and the manual processing.

ITPMS is an automated system which also includes the functions of problem management handling that are monitoring, escalating and controlling the problems. As an automated system, ITPMS is able to perform the creation, deletion and updating the record. In addition, the system also can supply the statistical data and information for the management.

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## **CHAPTER 1**

### **PROJECT OVERVIEW**

#### **1.1 Introduction**

This document is to propose the development of a management system which is a design of an integrated technical problem management at Bank Simpanan Nasional (BSN).

The technical problem has become an issue because it can affect the operational and customer service in BSN. Hence, ITPMS is a system that is designed to integrate the functions of monitoring, escalating and controlling the technical problem management. In additions this system also is able to supply statistical data or information for management of BSN.

The main aim of the system is to integrate the two types of processes involved in the handling of problem management at BSN. The types of processes are:

- i. Automated legacy system
- ii. Manually process of problem management

## 1.2 Background of problem

Helpdesk Unit is one of the units in the IT Department which acts as a liaison unit for all the technical incidents and IT problems between the IT department (Jabatan Teknologi Maklumat) and rest of BSN. The Helpdesk Unit which is established as a special technical support unit since January 2003 is to monitor and fine-tune the support of the technical services provided by the IT department.

The unit is to handle the problem management process for all the incidents and IT problems reported from Headquarters and Branches. Therefore the unit is a single point of contact for IT department in dealing with the user reports and complaints concerning the IT infrastructure and IT services provided by the IT department. All incidents and IT problems are channel to this Unit for the identification and analysis before escalating them to the proper groups or channel for further actions.

This unit will log, monitor and coordinate all technical incidents and IT problems reported by departments and branches in BSN. As a technical support unit, the unit also needs to provide statistical data or information to the management for the purposes of performance evaluation of services given by IT department.

The problem management for technical incidents and IT problems are divided into 2 categories as follows:

- i. Host Application Support
- ii. Client Server Support

The problem management for host application support is to handle any problems involving the IT infrastructure that relates to the mainframes and application systems.

The IT infrastructure and applications system involved are:

- i. Hardware



- ii. Software
- iii. Network
- iv. Environment – either production or test system
- v. Execution of application in production environment
- vi. Procedures or user operation

On the other hand, the client server support involves problems relating to Personal Computer, notebook, servers, LAN and any request on installation of computer or application systems.

Currently there are two scenarios or types of capturing the information and data for both categories. The technical IT incidents which relate to client server support is reported to the Helpdesk unit by completing the Technical Problem Form and is emailed to the Helpdesk unit for action. Besides the form, the unit also receives report through telephones call and memorandums.

The second scenario is the host application system involving getting information or data from the legacy system. All problems related to host application is registered in this system by the problem owner or problem controller.

The unit also will produce a monthly statistical report on both problems for management to review. The reports for both categories are produced manually by extracting data or information compiled from the system and summarized data (table in Ms Words format) for client server problems.

### **1.2.1 Host Application Support (HAS)**

The problem management for HAS is to handles any problems or incidents that only relate to the mainframe and application.

The HAS is using the IBM system – INFOMAN for handling problem management process. This is an automated online system that provides facility to record, view and monitor problem related to IT infrastructure, application and operational. The system also is used for tracking a problem from its recognition to its solution.

INFOMAN – Information / Management version 5 release 1 is an IBM system which started in middle 1990 and is used by the IT Operational department only. Initially the usage of this system is emphasizing on the change management. Beginning middle of 2002 and with the establishment of Helpdesk unit, the system is also extensively used for problem management. The system is a mainframe based with the support maintenance from IBM.

The user of the system is the IT personnel in the IT department. This user is the application owner or the problem owner. Every user is given the user-id to access this system. However, Helpdesk unit is the owner of this system and act as a Problem Controller. Problem Controller will monitor, track and escalate the problems registered in the system. The user is responsible to update the status of the problems once the problems are solved either with temporary or permanent solution.

The user-id given to IT personnel is only to authorized for creation and updating the records in the system. The closure and deleting of record is only authorized by Problem Controller.

### **1.2.2 Client Server Support (CSS)**

The emphasis of problem management in client server support started in middle 2003. This is due to the rapid growth of system developed using client server based concept and the widely used of PC and notebook. The client server support is to

handles problem related to client server based, personal computer, notebook, printer, cabling, LAN and also request for installation of computers or application system.

All related technical problems, incidents or request are reported by completing the technical problem form. The completed form is then email to the Helpdesk unit for actions. Besides the form, also received report via telephone calls or memo.

The technical problems for CSS are divided into two types that is the problems from Headquarters and the problems from branches. The problems from Headquarter is handled by Helpdesk unit. The internal user from Headquarters will email the technical form to the Helpdesk unit for action. These problems are then escalated manually to the support group for action by passing the printed technical form. Once the action is taken, the form will be pass back to the Helpdesk unit for recording the status.

On the other hand, the user from branches will report the problem through the Technical Support Unit at branches for actions. This unit will take action and record the status of problem in the Monthly Report Form. All problems and incidents at branches will be recorded in this form. At the end of every month, the forms are email to the Helpdesk unit for reviewing the status. This is one way of monitoring the status of the problems at branches.

The information or data in the technical form is then transcribe in the excel format table for record keeping purposes and tracking. The escalation and monitoring of the reported problems are done manually by checking the status from the form.

### **1.2.3 Management Reports**

The management report is prepared monthly and it is process manually. Data and information are extracted from the INFOMAN system and excel table for

analyzing. Reports produced are used for trend analysis and to check the service performance of IT to users.

### **1.3 Statement of the Problem**

The delay in solving the technical incidents and IT problems are due to the improper reporting of the problem to the correct channel. The escalation process of the technical incidents and problems to the incorrect problem owner or system/product owner will delay the solution and actions taken. This will give serious impact to the services provided to the user or customer.

Thus, the purpose of this system is to improve the handling of problem management and also be able to provide statistical data or information for problem analysis on time. Often the delay in producing such report is due to the late receiving the Monthly Form from the Branches and also the time taken to transcribe the information or data into the Microsoft Excel table is too slow.

In addition, the system also is used for problem tracking and monitoring the technical support given by the IT department. This is to ensure that all problems are solved within the timeframe given.

### **1.4 Project Objective**

The objectives of this project are as follows:

- i. To study for the improvement and expedite technical support given by Helpdesk unit in Jabatan Teknologi Maklumat at BSN.

- ii. To analyze and design for the integration of two categories of problem management, that is the host application and the client server.
- iii. To develop the consolidation of data or information captured from Headquarters and Branches.
- iv. To formulate policy and procedure of problem management that is align with the new system.
- v. To provides monthly statistical report for management to evaluate the performance of the technical support given by IT department at Headquarters and Branch levels.

## **1.5 Project Scope**

The scopes of the project are:-

- i. To log and register information and data regarding technical problem such as request for installation, operational failures to the execution of application, operational failure to the counter services and Automated Teller Machine in Headquarters and Branches.
- ii. To control, track and monitor all reported problems and request for installation and operational or system failure.
- iii. To categorize the problems based on the severity level and also to prioritize the problems.
- iv. To access and perform online inquiries on the reported problem and requests by the Helpdesk unit, Technical Support unit at main branch and problem owner
- v. To produce statistical data and summarize information for the management. The data or information provided is used as a check list and references for the management to know and evaluate the service level of technical and IT support given to the internal and external customers of BSN

- vi. To produce a summary report for the purpose of analysis in the trend or pattern of problem.
- vii. To develop the system in the web based with the functionality of problem management to create, update and delete problem records.
- viii. To perform the test plan for the system according the test script prepared.

## **1.6 Importance of Project**

The importance of this project is to be able to provide a comprehensive system which integrates all functions of technical problem management and statistical data or information for the management review. With this system, the service level of technical support can be improved and actions expedited.

As a summary the system is benefited to the Helpdesk unit with the following:-

- i. Improved IT services and quality
- ii. Complete resolution of problems causes are identified and corrected
- iii. Clearly defined the root cause of problems and incidents.
- iv. Expedite the troubleshooting for problem solving
- v. Avoid unnecessary escalations and inappropriate resource allocation
- vi. Avoid longer time to resolution

Integrated Technical Problem Management System is expected to automate the problem management process and also be able to provide a statistical data or information for problem analysis. Hopefully with this system, all technical problem management is monitored, controlled and escalated to the proper problem channel. In

addition, with this system, the flow or process of handling problem would be more systematically managed.

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