

**BUSINESS PROCESS IMPROVEMENT OF NON STUDENT-
RELATED EDUCATIONAL PROCESS IN AN ACADEMIC
SECTOR: A CASE STUDY OF THE TECHNOLOGY
INFORMATION SYSTEM MANAGEMENT DIVISION**

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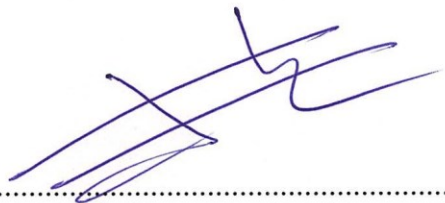
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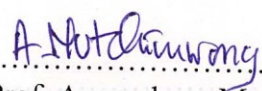
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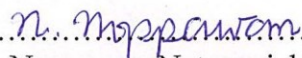

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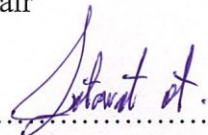
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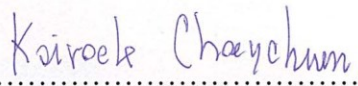
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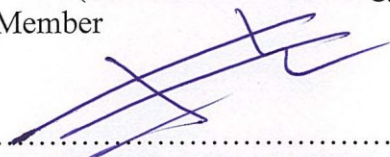
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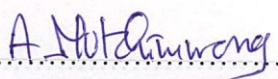

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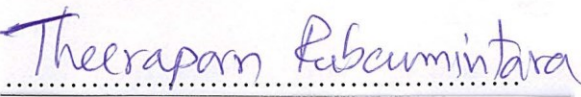

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ABSTRACT

The Business Process Improvement (BPI) is a well-known intelligent process a widely used in modern business. It helps the users realize problems, obstructions, difficulties and the unnecessary repetitions of the working process. The objective of this thematic paper was to give importance to improving and developing functions of the Information Technology Division of Mahidol University (ITM), to increase efficiency using the BPI. This thematic paper also focused on details of processes to facilitate the student services that are not directly related to any education as student academics. The emphasis was for the present situation. Data were collected then used in planning to improve the function and to check what else could be improved. After using the BPI techniques to increase efficiency of document and library handling, it was found that in documentation, the average time required was 3 hours from 8 hours. In the library, the efficiency was accounted for the reduction of book return, borrowing and saving spaces. The evaluation of this improvement using the audit checklist showed that the stake holders were satisfied with the improvements. This showed that the BPI could actually be applied to this type of function.

**KEY WORDS: BUSINESS PROCESS IMPROVEMENT/ DOCUMENTARY
PROCESS/ LIBRARY PROCESS**

54 pages

การปรับปรุงกระบวนการทางธุรกิจสำหรับกระบวนการการศึกษาที่ไม่เกี่ยวข้องกับนักศึกษา โดยตรง ในภาคการศึกษา: กรณีศึกษากลุ่มสาขาวิชาเทคโนโลยีการจัดการระบบสารสนเทศ
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บทคัดย่อ

การปรับปรุงกระบวนการธุรกิจเป็นกระบวนการอันชาญฉลาด และใช้กันอย่างแพร่หลายในองค์กรธุรกิจสมัยใหม่ ทำให้สามารถวิเคราะห์ปัญหา และอุปสรรคข้อขัดข้องต่าง ๆ ที่ทำให้การดำเนินการทางธุรกิจเกิดความล่าช้า ช่วยลดความซ้ำซ้อนของกระบวนการทำงาน งานวิจัยฉบับนี้มีวัตถุประสงค์เพื่อปรับปรุงกระบวนการทำงานในกลุ่มสาขาวิชาเทคโนโลยีการจัดการระบบสารสนเทศให้มีประสิทธิภาพมากยิ่งขึ้น โดยใช้กระบวนการปรับปรุงกระบวนการธุรกิจมาเป็นเครื่องมือหลักในการปรับปรุงขั้นตอนการทำงานต่าง ๆ โดยงานวิจัยฉบับนี้จะมุ่งเน้นการปรับปรุงกระบวนการทางธุรกิจสำหรับกระบวนการการศึกษาที่ไม่เกี่ยวข้องกับนักศึกษาโดยตรง เน้นวิเคราะห์สภาพปัญหาปัจจุบัน แล้วนำมาวางแผนปรับปรุงเสนอขั้นตอนกระบวนการทำงานให้มีประสิทธิภาพมากยิ่งขึ้น เมื่อนำการปรับปรุงกระบวนการทางธุรกิจดังกล่าวมาปรับใช้ในการปรับปรุงกระบวนการทำงานทั้งสองที่กล่าวมาข้างต้น จะเห็นได้ว่างานรับส่งเอกสารเข้าและออกสามารถลดระยะเวลาในการทำงานจากเดิม 8 ชั่วโมงเหลือเพียง 3 ชั่วโมงเท่านั้น ส่วนงานบริการห้องสมุดสามารถช่วยปรับปรุงระบบการยืมคืนหนังสือแบบเก่าให้เป็นระบบอิเล็กทรอนิกส์ อีกทั้งช่วยลดพื้นที่ในการจัดเก็บหนังสือได้อีกด้วย จากการสอบถาม สัมภาษณ์ และประเมินผลพบว่าคณาจารย์เจ้าหน้าที่ ในกลุ่มสาขาฯ มีความพึงพอใจในการปรับปรุงกระบวนการนี้ ดังนั้นจึงเห็นได้ว่าการปรับปรุงกระบวนการทางธุรกิจเป็นเครื่องมืออันทรงประสิทธิภาพสามารถนำมาปรับใช้กับกลุ่มสาขาการจัดการเทคโนโลยีสารสนเทศได้เป็นอย่างดี

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CHAPTER I

INTRODUCTION

1.1 Background and Problem Statement

In present world of business, the information technology is important and the key success in business for both government and private sectors. Several companies realize the importance of IT therefore they introduce the IT as one of their strategy in driving their organizations, improving products and qualified services in order to smoothen their functions, reducing redundancy, building confidence in their qualities and services, and sustainable increasing organization income. Twenty years ago, information technology was very new in Thailand. The number of people having IT knowledge and skills was very little and not enough for the society. With the broad vision of the Faculty of Engineering, Mahidol University Administrative Committee, the master program of Information Technology (TISM) was established in 1994 and later updated to support the continuous changing and developing technologies. In 2013 the Program was officially improved to the Special Master Degree of Science Information Technology Management Program (ITM) and was given only in weekends. The objective is to produce qualified graduate students having knowledge and skills in Technology Management along with moral and ethics.

In 2013, the Administrative Committee realized the importance of producing IT personals in management level, therefore they set up the Special Ph.D. Program to produce personals with knowledge and skills in information technology management to support the present digital era. Here is the organization structure of the IT Management.

ORGANIZATION CHART



Figure 1.1 Organization Chart

Academic services are the main function of ITM. Apart from learning and teaching, ITM provides student services such as research supervisions, thesis examinations, academic conferences, e-learning and e-library promotion, English thesis writing supervision, special lectures by qualified experts, selection of students for university scholarships, and foreign country academic visit. Presently, ITM attracts more students every year but the number of supporting staff is still very limited, unable to keep up with the increasing number of students.

Sometimes communications and processes among ITM and students, even though the communications within ITM itself were disrupted by many factors such as unclear information on services, not enough co-ordinations, incomplete information, lacking of tools to facilitate their processes. These cause delay in student services and mistakes, therefore it is necessary to improve the qualities of services and other works for more efficient output.

Education and student services of ITM, Mahidol University can be divided into 3 main categories as follows: student related process, student nonrelated process, and non-academic related process.

The objective of this thematic paper is to give importance in improving and developing functions of ITM, to increase more efficiency by using the Business Process Improvement Method (BPI). The BPI is a well know intelligent process and widely used in modern business. It helps us realize problems, obstructions, difficulties, unnecessary repetitions of working process, data communication, incoming and outgoing of documents for both within ITM and other departments. This thematic paper studied in details on processes to facilitate students only, not directly related to any education of academic providing to students. The emphasis is for the present situation. The collected data were then be used for planning to improve the function and check what else could be improved. Then testing the improved function with the staff concerned was carried out. The satisfaction evaluation was also tested by using questionnaire and direct interview.

1.2 Objective

To improve and increase efficiency of student services at ITM by using the Business Process Improvement Method (BPI).

1.3 Scope of Study

The scope of this thematic paper is to give importance in improving and developing functions of ITM, to increase more efficiency by using the Business Process Improvement Method (BPI). The BPI is a well know intelligent process and widely used in modern business. It helps us realize problems, obstructions, difficulties, unnecessary repetitions of working process, data communication, incoming and outgoing of documents for both within ITM and other departments. This thematic paper studied in details on processes to facilitate students only, not directly related to any education of academic providing to students. The emphasis is for the present situation. The collected data were then be used for planning to improve the function and check what else could be improved.

Steps of working can be summarized as follows.

- Studying the present student services at ITM by focusing on facilitating students only, not education and academic role. This was done by interviewing the staff responsible.
- Analyzing obstacles, barriers, unnecessary repetition of process and other factors causing impacts on the process in every contact nodes.
- Planning and drawing the work plan to improve all process by using the BPI as a tool.
- Introducing the improved and high efficient function to the staff responsible.
- Evaluating and concluding the results of using the BPI

1.4 Expected Results

After completing the procedures, the results of this study can be summarized as follows.

- Increased efficient staff
- Less working time.
- Less costs and expenses.
- Less costs and expenses.
- Clear processes and working steps for student services
- Good relationship among lecturers, staff and students.
- New opportunities for new coming students.

CHAPTER II

LITERATURE REVIEW

2.1 Theory Review

2.1.1 Business Process

The Business Process [1] is a primary step in operating any kind of business industry which is start right from investing money for equipment, machinery, raw material, labor expenses, including all expenses concerning management functions through distributing products or services in order to gain higher market share than other competitive and higher incomes.

2.1.2 Business Process Improvement

Business process Improvement [2] or BPI is a well-known method that is continuous improvement the performance for the business or organization which can be changing the original process for better results. The results may be best affected the management functions, higher profit, higher revenues or better progress on the future goal.

Why BPI is needed?

- Improving and delivering better business results
- Reducing business costs
- Reducing time waste
- Reducing mistakes and re-works
- Improving customer satisfaction

2.1.3 BPI Methodology [3]

The Simplified approach

The key Steps in BPI,

Step 1: Define the desired business results

Step 2: Analyze & Map “As-Is” Process

Step 3: Estimate “As-is” Process attributes

Step 4: List problem areas and challenges

Step 5: Plan and Map “to-be” Process

Step 6: Estimate attributes of “to-be” process

Step 7: Trial Run

Step 8: Implement “to-be” process

Step 9: Continuous Improvement

The nine steps make up what is referred to as the simplified BPI management process. BPI can be simplified into 9 mandatory steps as follows;

Step 1: Define the desired business results

- Defining what the organization’s strategic goal and purpose are
- Determining who the organization’s customer or stakeholder are
- Aligning the business process to meet the customer’s requirements

Step 2: Analyze & Map “as-is” process

- Decompose a functional process step-by-step into activities that make up the process
- Draw a multi-level diagram that corresponds to the way that work is performed.
- The “deployment” flowchart method is preferred as it shows the activity or task owners clearly.

Step 3: Estimate “As-is” process attributes

- How much time is taken?
- Is the performance consistent?
- How much does it cost?
- Is the activity or task adding value?
- Are there mistakes made?

Step 4: Gap and problem analysis

- Where are the constraints?
- Are there special considerations?
- What’s making things the way they are?

- Legal Issues?
- Security or Safety Issues?

Step 5: Plan and Map “To-be” process

- Activities & Tasks that can be removed
- Cycle times that can be reduced
- Procedures that can be simplified
- Computerization
- Use of technology

Step 6: Estimate attributes of “To-be” process

- Improved cycle times
- Reduced costs
- Better quality
- Higher customer satisfaction

Step 7: Trial Run-Optional

- Done only when necessary and possible
- A rest of “workability”
- Fine tune process before launch

Alternative: Transition period with close supervision

Step 8: Implement “To-be” process

- Seek approval where applicable
- Prepare Transition Plan
- Procure / Prepare needed resources
- Close monitoring
- Be prepared for contingencies
- Close monitoring
- Be prepared for contingencies

Step 9: Evaluation and continuous Improvement

- Define clear performance measures
- Best practices / benchmarking
- Up the ante!!

2.1.4 Tool and Techniques for process improvement [4]

- Problem solving methodology, such as Drive
- Process mapping
- Process flowcharting
- Force field analysis
- Cause & effect diagrams
- CEDAC
- Brainstorming
- Pareto analysis
- statistical process control (SPC)
- Control charts
- Check sheets
- Bar sheets
- Scatter diagrams
- Matrix analysis
- Dot plot or tally chart
- Histograms

2.1.5 Quality of Business Process Improvement [5]

Seven Steps to operational Excellence :

1) **CREATE A PROCESS MASTER.** List each organizational process, and the suppliers, inputs, major process activities, outputs, customers and key metrics for each.

2) **PRIORITIZE PROCESSES.** Using the organization's strategic success criteria as weighting factor, determine how each process impacts their fulfillment and rank accordingly.

3) **ASSEMBLE THE TEAM.** Include an executive sponsor, the process supplier, the process owner, process participants and the process customer.

4) **CREATE PROCESS MODELS.** Detail the flow of activities in the process and identify departments, resources, decision points and narratives where indicated for clarification.

5) **PERFORM ROOT CAUSE ANALYSIS.** Using brainstorming, affinity diagramming, identify then problem.

6) **ADDRESS TOP CAUSES.** Have the team charter projects, as appropriate, to address the causes identified as most problematic during Pareto analysis.

7) **RE-MEASURE.** To validate the effectiveness of the solutions implemented as a result of the successful completion of the chartered projects, re-measure using check sheets.

2.2 Research Literature Review

2.2.1 Business Process Improvement on Maintenance Management: a case study

by JoãoAbreua, Paula Ventura Martinsb, Silvia Fernandesb, and Marielba Zacariasb:[6] This research improve the business process for ANA, SA Aeroportos de Portugal. There are using business process strategies based on Information Technology Infrastructure Library (ITIL) 5 steps via observing, analyzing the environment and combining different data collection methods and making notes. The 5 steps of ITIL strategy are service strategy, service design, service transition, service operations and continual service. 1. Service strategy: There are the identification about change management, Configuration management, configuration item, knowledge management and resource management.

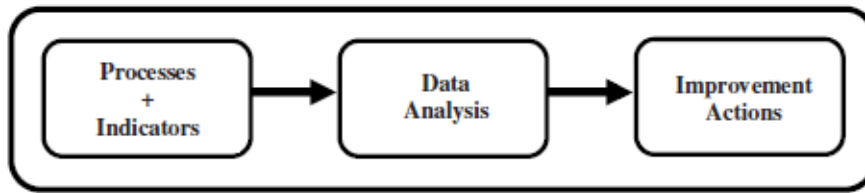


Figure 2.1 Goal of the maintenance management procedure.

2.2.2 Service design

There are the identification about improvement/correction actions that could create value for existing or new business processes. Data collection and analysis provided by key members in maintenance management allowed the identification of five distinct

Actions:

- 1) Contract management improvement/correction
- 2) Improvement / correction in material asset management
- 3) Improvement / correction in consumption management
- 4) Improvement/correction of human asset management
- 5) Improvement / correction in ratios management between corrective maintenance and preventive maintenance.

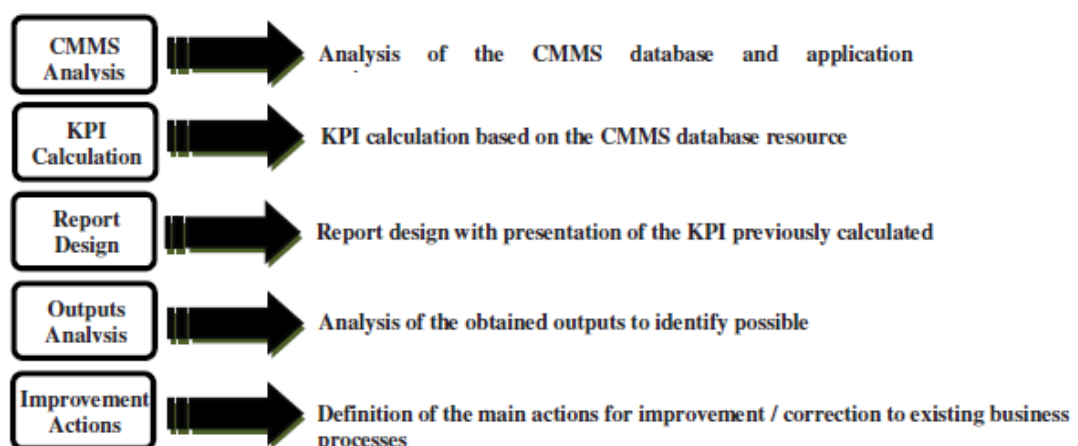


Figure 2.2 Design phases of the maintenance management procedure.

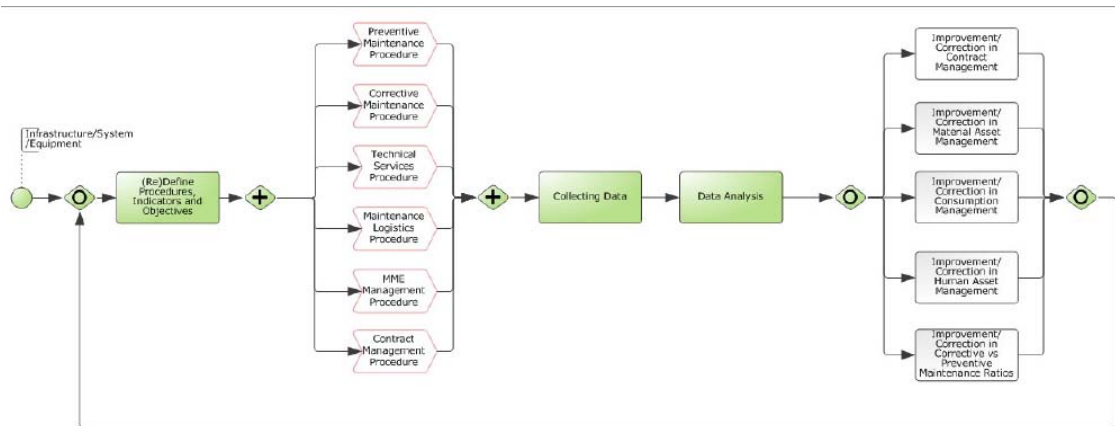


Figure 2.3 Maintenance Management Procedure.

2.2.3 Service transition

In this stage are settings of the design stage. There was the additional from the existing processes but it do not affect with the operational impact of the maintenance management procedure.

2.2.4 Service operations

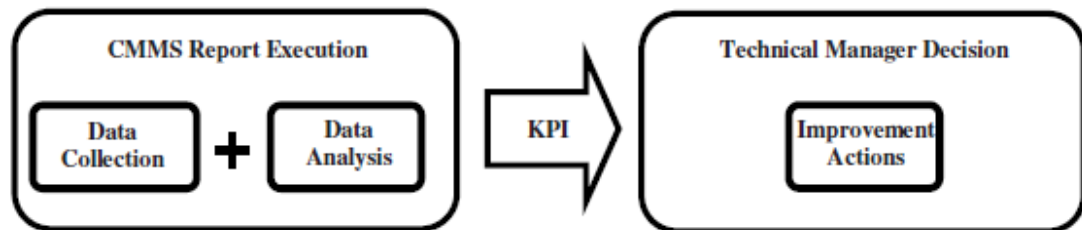


Figure 2.4 Operational diagram of the maintenance management procedure.

As Figure 2.4 is the conception of maintenance management procedure. This diagram based on a set of best practices and concepts covered in ITIL and presented in this paper, theoretical aspects.

The process is the continuous improvement. There are the four sub processes presented, as shown in Figure 5. Which is the Deming’s PDCA cycle (Plan, Do, Check, Act).

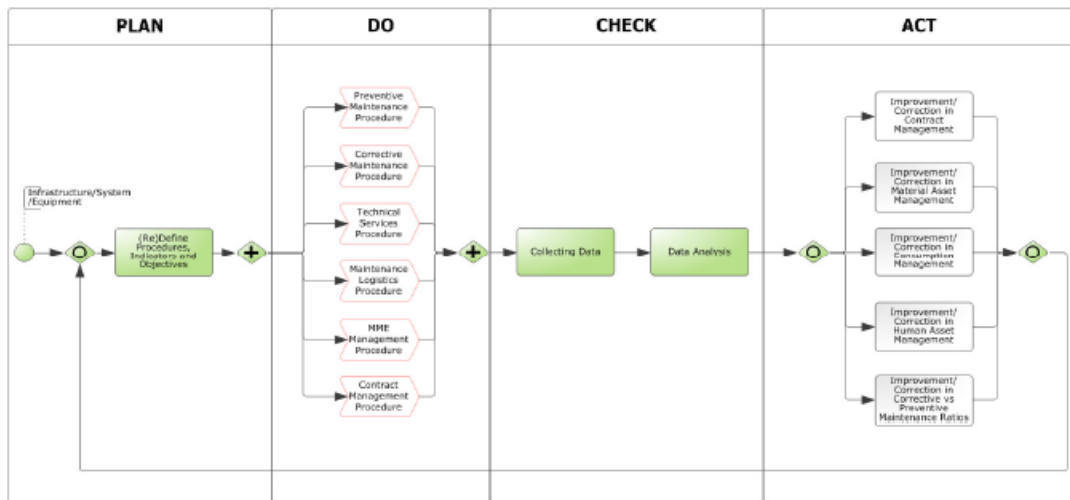


Figure 2.5 Deming’s cycle of the maintenance management procedure.

2.2.5 Continual service

The maintenance management procedure should be guaranteed to ensure the sustainability and quality of the maintenance management procedure. So they do as follows

- The correct reports implementation is controlled by the MMS administration at each airport;
- The quality of MMS records is controlled constantly.
- Apply the Deming’s cycle to a set of activities. It is upgraded the quality of implemented procedures.
- The preparing as many frames or boards which the certain degree is analyzed the major reports to support the procedure at application level.
- Inform those related in maintenance management which are all changes at the level of production processes, as well as providing new reports;
- Investigating, idealizing and producing new metrics that allow added value to KPI calculations and in turn contribute to the on-going procedure evolution.

In conclusion, the implementation controlling of the maintenance management system in ANA Airports of Portugal, allowed the know about the business process model related to maintenance, starting with infrastructure, systems and equipment, via the organizational structure with respect to the different departments with a key factor, contacting with implemented business processes directly and settings for future implementations.

CHAPTER III

RESEARCH METHODOLOGY

After reviewing some related studies and details about the BPI and their applications in modern business, the information is used for developing research methods here and can be explained as follows.

3.1 Preliminary Study

In order to understand details about functions of ITM, it is necessary to study the history, organization structure, vision, and missions of ITM. These can be done by using the information from the ITM website and interviewing some senior professors and staff who have experiences about them. Then summarize the information into the following topics.

3.2 Problems Identification

In the past, there was little problem on serving students because the number of student was not as many as today. At present, more students attend the Program every year but the number of professors and supporting staff is still very limited, not enough for the increasing students. This causes problems in servicing the student on facilitating role. An important problem at ITM is the communication among staff and students, and among students themselves. The communications within ITM are also disrupted by many factors such as unclear information, lacking of co-ordination, incomplete information, lacking of tools to facilitate the processes. These cause delay in student services therefore it is necessary to improve the qualities of services and other works for more efficient output.

3.3 Stakeholder Interview (First Round)

After getting information through ITM website and other literature, next step is to get the required information by interviewing stake holders. The stake holders here are defined as professors, supporting staff and students of ITM. The purpose of interview is to determine their responsibilities, functions and job description (JD) of each person. The results of interview will be studied carefully to improve the structures and relationships of the tasks related to each function. This thematic paper studies in details on student services, apart from education role, especially on the present situation. The result will be a guide for improving the efficiency of student services at ITM.

3.4 Architectural Designs

The following diagrams show the structure of function, job, and responsibility of each position in ITM. These are the primary design by the author after reviewing literature and interviewing stake holders. Which will be describe all job responsibilities of each position in ITM in the following table 3.1-3.7.

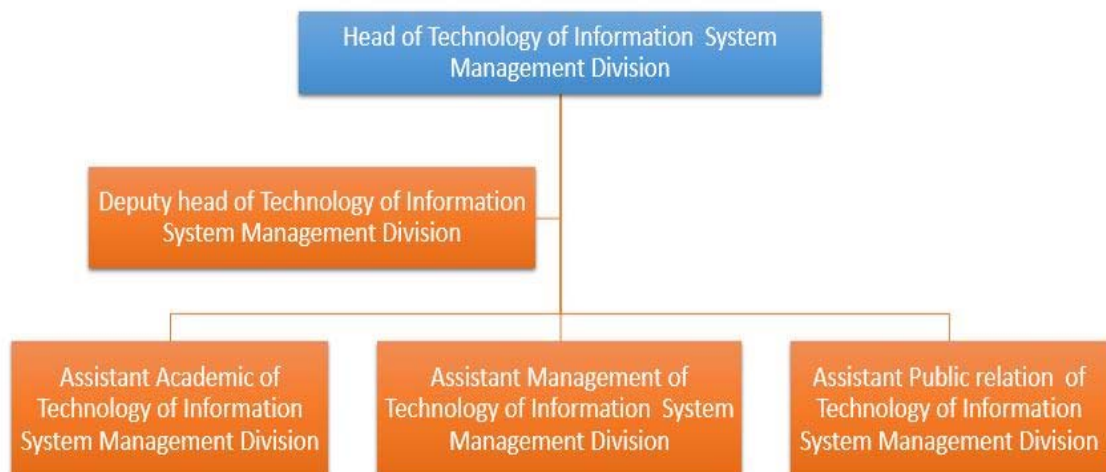


Figure 3.1 Value Chain

Table 3.1 Job responsibility in Eeducation Expert.

Position	Job responsibility
Education expert	Education Services Student services Student database Human and resources Planning course Education quality assurance Comprehensive Examination Evaluation of the performance in Information System Management Division Student counseling

Table 3.2 Job responsibility in Education Supporter.

Position	Job responsibility
Education supporter	Student services Student database Coordinate the thesis / thematic Student status Student counseling Public relations education

Table 3.3 Job responsibility in General Administration (Administration Role).

Position	Job responsibility
General Administrator (Education role)	Correspondence Librarian Coordination with the University Graduate Department Arrange meetings

Table 3.4 Job responsibility in General Administration Officer (Financial).

Position	Job responsibility
General Administrator (Financial and procurement role)	Budgeting Purchasing and selling off Asset Asset Inspection Building services

Table 3.5 Job responsibility in Computer Technical Officer.

Position	Job responsibility
IT Service Provider	IT Infrastructure maintenance IT Asset IT specifications consultant E-Learning support ITM website updating

Table 3.6 Job responsibility in English Consultant.

Position	Job responsibility
English Consultant	Checking English for students' thesis and papers. Checking English for professors' research papers Providing short English course English academic consulting

Table 3.7 Non Student-Related Educational Process.

Non Student-Related Educational Process	
Position	Job responsibility
Education expert	Planning course and schedule Education quality assurance Evaluation of the performance in Information System Management Division
Education supporter	Student database
General Administrator (Education role)	Correspondence Library Coordination with the departments within the University.
English Consultant	Check the language of the thesis work students. Check language research professor English academic shot course English academic consulting

This thematic paper studies in details on student services, apart from education role, especially on the present situation as follow.

3.5 Stakeholder Interview (Second Round)

Because the stake holders in this study are professors, supporting staff and students, therefore the interview was done on each group with different sample size according to the number of people in each group.

The sequence of interview is as follow. First, interview the Education Expert, then followed by the Education supporter and the General Administrator (Education role). The purpose of the interview is to understand details of functions

clearly. This study focuses on the tasks that are related to student services only, not on student personally as follows:

3.5.1 Correspondence

Correspondence to be studied includes.

- Receiving incoming and outgoing documents via the system called MUSIS which is a correspondence handling of the university.
- Filing hard copy documents as well as registering running number for every document using the log-books.
- Sorting documents according to priorities such as urgent, very urgent, top urgent to be submitted to the head of ITM for considering and signing.
- Distributing documents to each person in charge, making the cover letter if necessary.
- Tracking the progress of the documents and reporting to the Head of the ITM.
- Filing every document in proper category for both hard copy and digital files for later uses.
- Choosing documents older than five years to be destroyed according to standard methods given by the university.

Problems found

The problems found after studying include.

- So many emailed documents, sometimes up to 20-30 emails per day.
- No notification in MUSIS system, no notification via e-mail.
- Only the General Administrator (education role) can access to the MUSIS, if absent then all correspondences will be idle.
- Even though the documents have already been submitted to the ITM Head, some occasions it takes longer times for the ITM Head to consider and sign out.

3.5.2 Library

After studying the ITM library system, the following observations are found.

- No plan is made for buying new books for the library.
- Lacking co-ordinations between person who responsible for the library and the person who responsible for purchasing.
- No proper form for borrowing books, only short note from a borrower left on the shelf where the book was taken. The book borrowing processes must be able to handle maximum borrowing duration (one week for one borrow), late return (5 THB per book/day).

Problems found

After making careful investigation on the ITM library, the following problems are found.

- Professors do not know when to place new book order, therefore they may not have enough time to choose the books effectively.
- Not known in advance about new book budget, some good books may be missed.
- Books are not collected in an appropriate system.
- No late return tracking
- Some books were lost
- The evidence of borrowing is only a written note left on the shelf which is very difficult to trace.
- No system for handling old books. This occupies more space and left small room for new books.

3.5.3 The English Consultant

The following are the jobs done by the English Consultant.

- Grammar correction. The English Consultant receives research papers from the Education Supporter who makes preliminary classification of the student papers. The English mistakes found will be marked with red circles along with a note to “RWA” which means re-write all.
- In some terms, English Thesis Writing will be given as a special course for those who register. Instructor will help students writing their English.

- Consulting how to write English research papers is planned to open as a special language clinic.

Problems found

- It takes rather long time to check for English Grammar alone (about 2 days). Editing which will be done by the supervisor takes even longer time.

3.6 As-is Process Design

The existing tasks to be studied by using the BPI are correspondence, library and English checking. The workflow of each selected task is shown in the following figure.

3.6.1 Correspondence: Letter and Documentary Process

There are three main process as follows:

3.6.1.1 Incoming Document Process

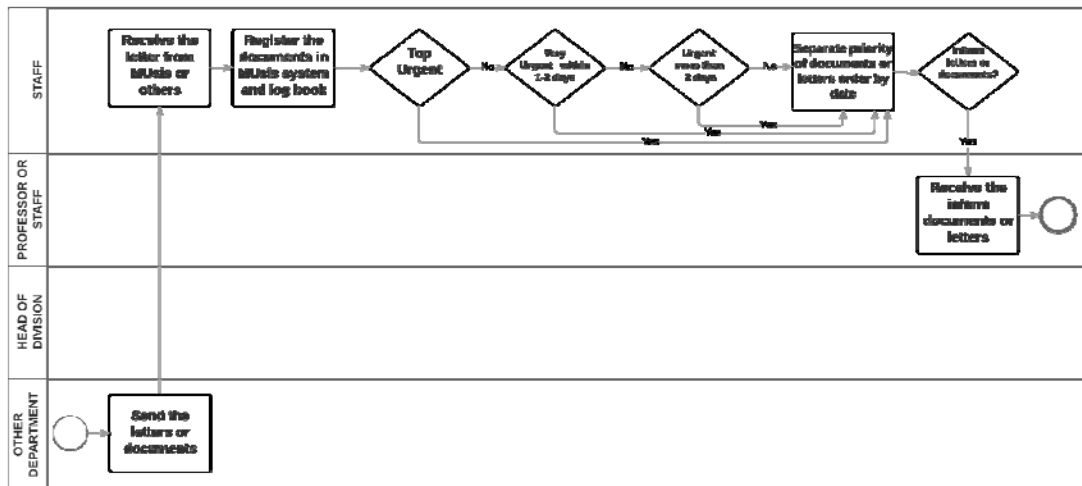


Figure 3.2 Incoming Document Process

3.6.1.2 Outgoing Document Process

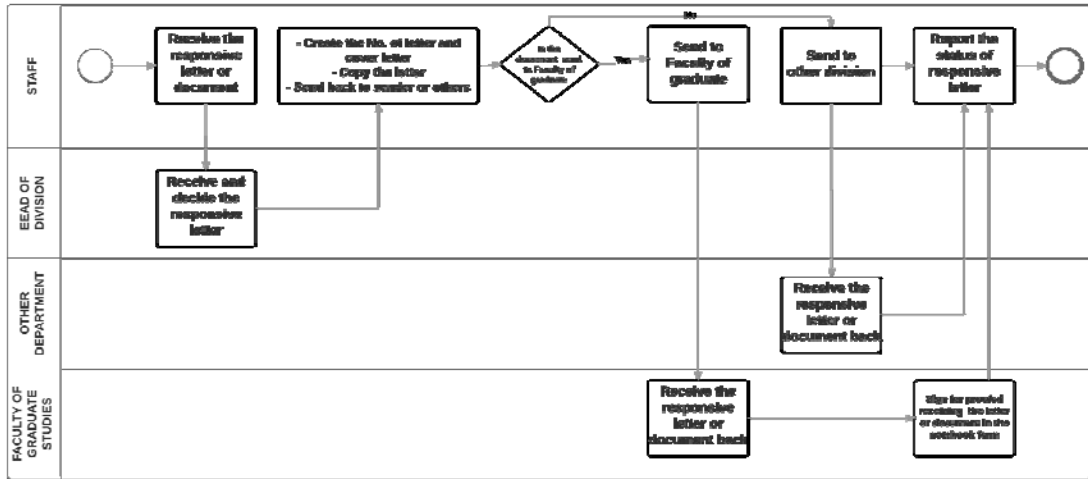


Figure 3.3 Outgoing Document Process

3.6.1.3 Destroying Document Process

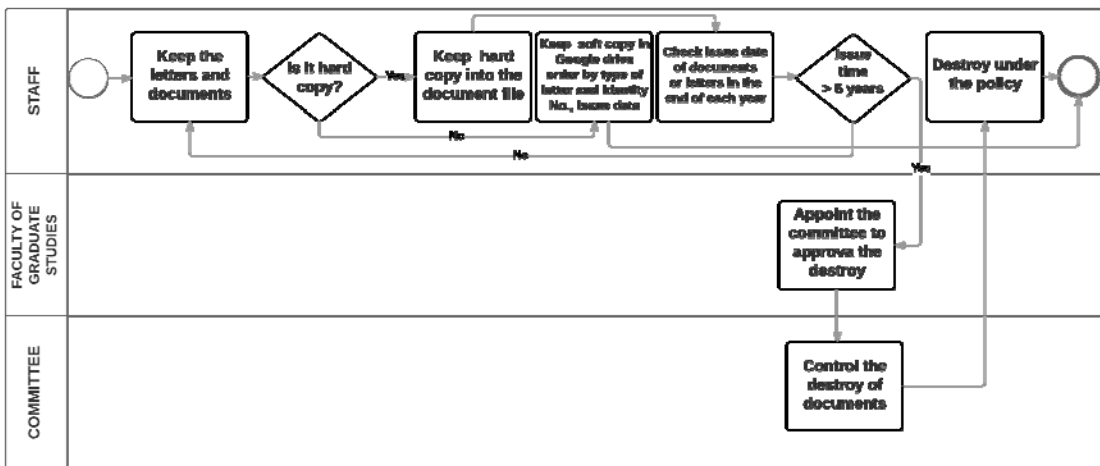


Figure 3.4 Destroying Document Process

3.6.2 Library Process

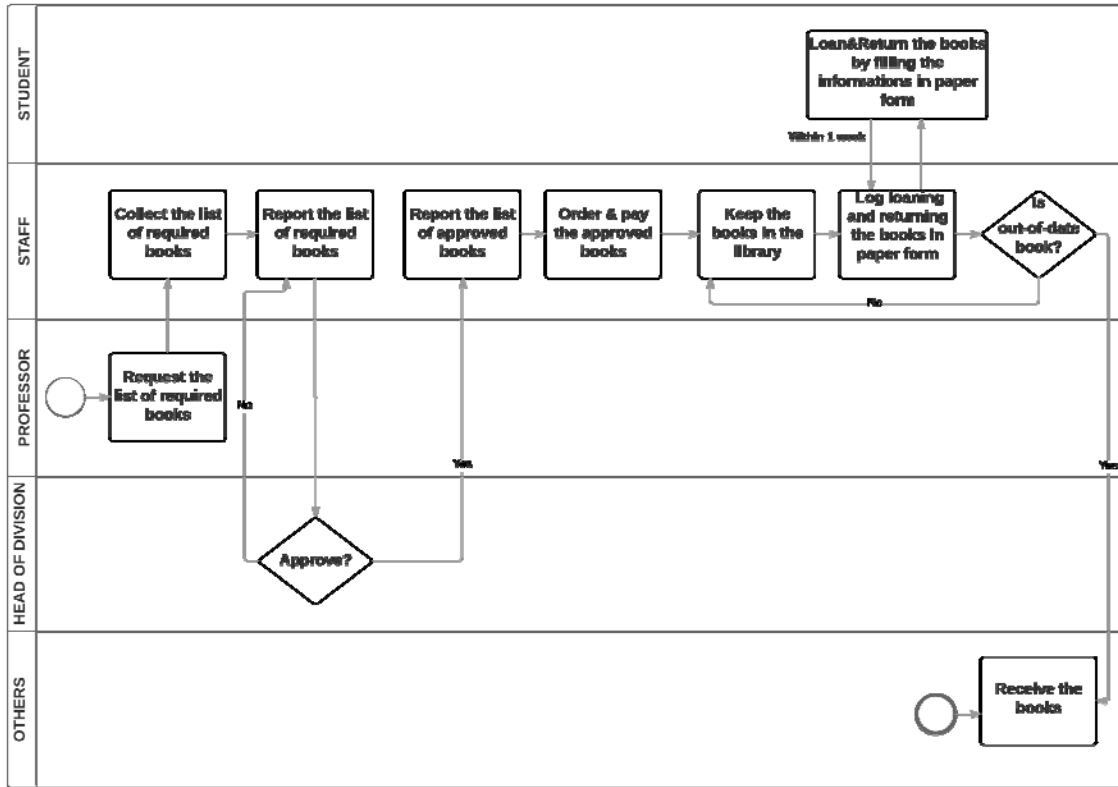


Figure 3.5 Library Process

3.6.3 English Consultant

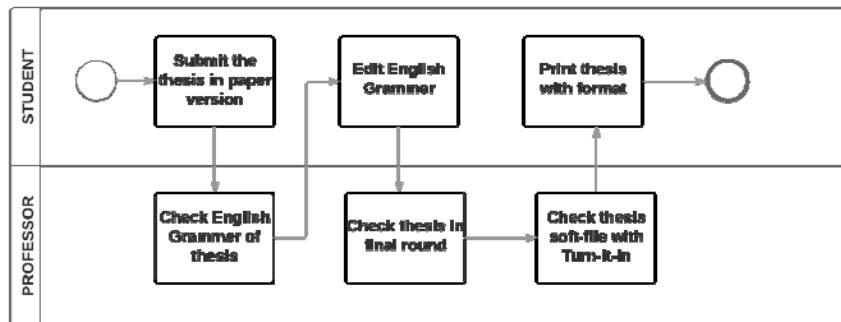


Figure 3.6 English Consultant

3.7 Gap Analysis

The data were analyzed for gaps in the process. The gap here means anything might be improved to increase the efficiency. The collected data were then be used for planning to improve the function and check what else could be improved. Then testing the improved function with the staff in charged was done.

3.8 To be Process Design

Alternatives proposed here include improving document process and library management. Details of these alternatives are given in Chapter 4. This study shows that these are significant processes at ITM that needed to be improved first. The improvement alternatives were also presented in form of flow diagram for easy communication, which will be used as an aid in the process of each functions.

3.9 Evaluation

Finally, after proposed all alternative of improvement, in order to confirm the success when deployed, it is essential to test for the satisfaction evaluation. This was done by direct interviewing the staff in charged and assessing statistically.

3.10 Timeline

Table 3.8 Timeline

<i>Improvement Process for Academic</i>						
Activities	Month					
Improvement Process for Academic	1	2	3	4	5	6
Preliminary Study						
Define Problem						
Interview #1						
Design Architecture						
Interview #2						
As is Process						
Thematic paper title and thematic paper advisory committee						
Gap Analysis						
To be Process						
Evaluation						
Oral thematic paper defense and committee						

CHAPTER IV

RESULTS AND DISCUSSION

This thematic paper studies in details on student services, apart from education role, which include:

- 1) Planning course and schedule
- 2) Education quality insurance
- 3) Evaluation of the performance in Information System Management

Division

- 4) Student Database
- 5) Correspondence
- 6) Library
- 7) English Consultant

Although there are 7 functions at ITM, only two of them were selected for detailed study because they are significant processes which have impacts on students. These are the documentary process management and library process management which are necessary to be improve based on the result of interviewing staff in charge.

4.1 Documentary Process Management

The flow of all in-coming, out-going, and destroying old documents are shown in the following diagram.

4.1.1 AS-IS: Process of Documents and Letters Process Management

The present process of document works before altering is shown in the following diagram.

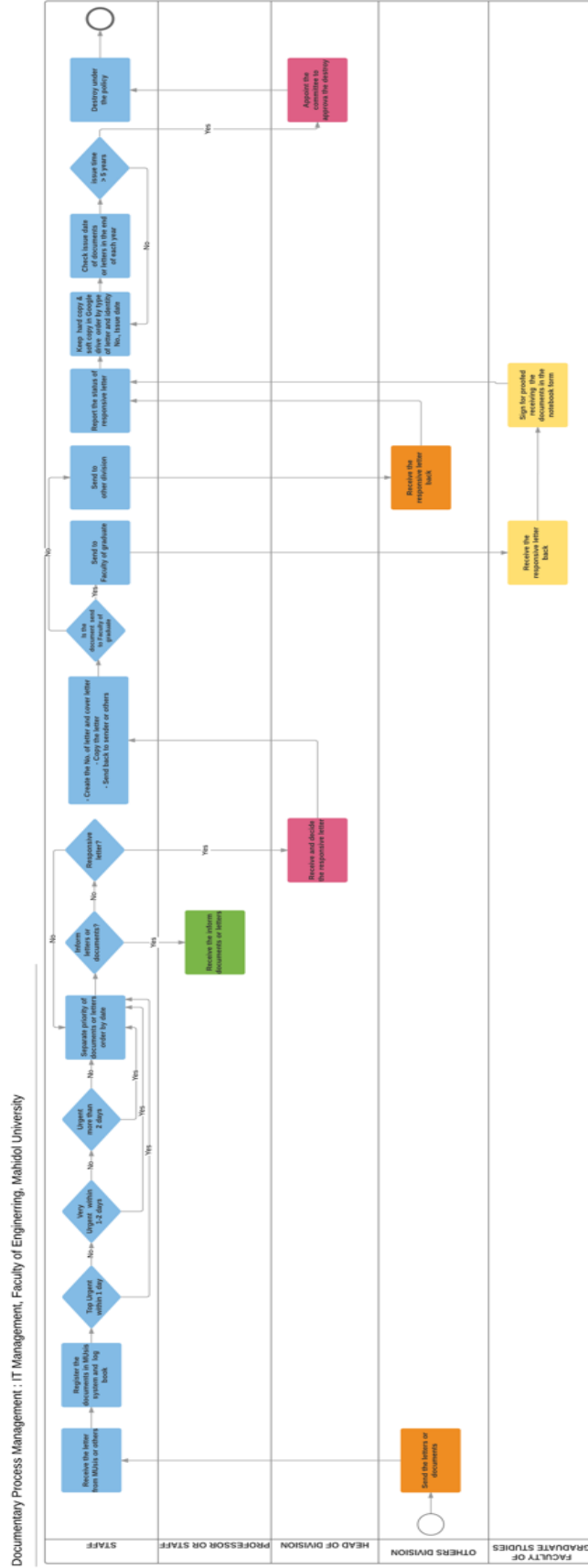


Figure 4.1 AS-IS Process of Documents and Letters Process Management

4.1.1.1 Incoming Document Process

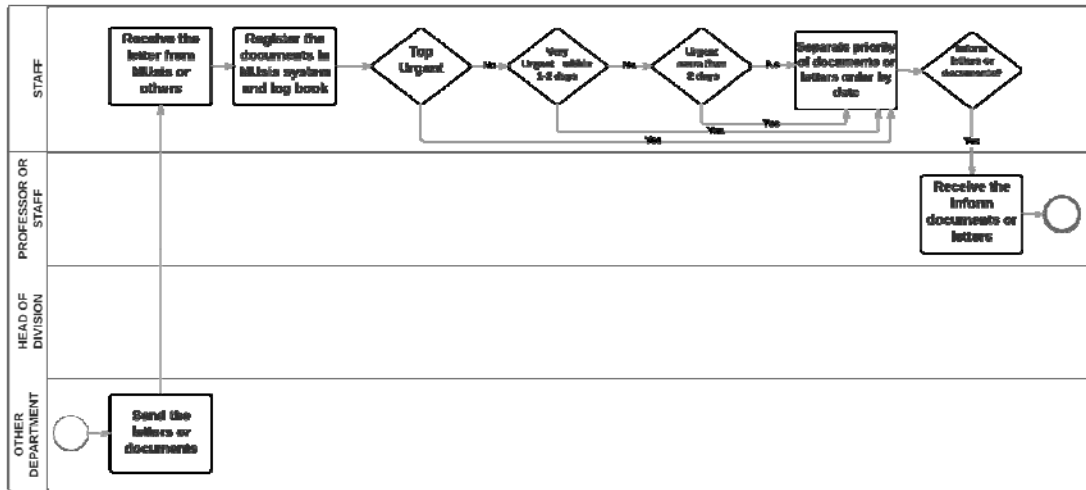


Figure 4.2 AS-IS Process of In-coming Documents and Letters Process Management

4.1.1.2 Outgoing documents Process

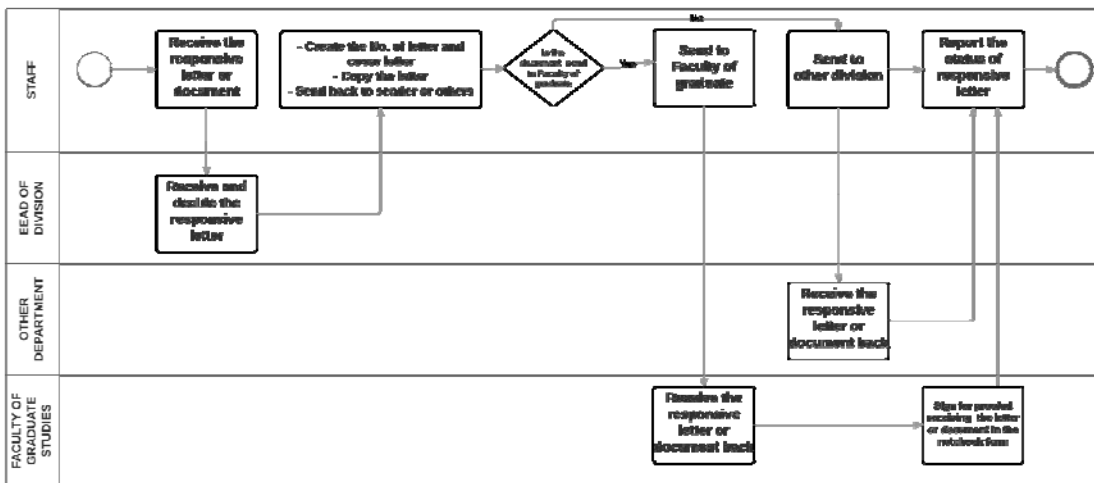


Figure 4.3 AS-IS Process of Out-going Documents and Letters Process Management

4.1.1.3 Destroying Document Process

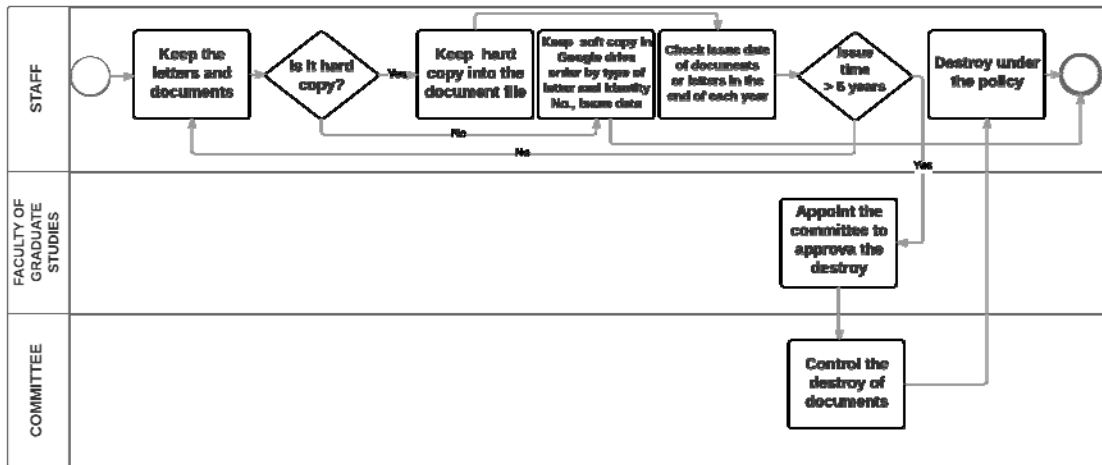


Figure 4.4 AS-IS Process of Destroying Document

Figure 4.4 above shows the process of destroying old and out of date document which must be followed by the University regulation.

According to the figure 4.1, 4.2, 4.3 above the as-is flow of Documents and Letters Process Management begins right from the other divisions sending the documents or letters via the system called MUSIS. Then the Administrative Officer registers all concerned matters in the MUSIS system in order to clarify and acknowledgement. After that the Administrative Officer will then classify all documents and letters into priority order: top urgent, very urgent and urgent with date and time received. If the documents or letters were just to inform, they will then be distributed to professors or staff concerned, but if they needed consideration and decision by the ITM Head, the Administrative Officer will then make a summary of the contents and pass them to the Head for making a decision. After the decision was made, the documents or letters will then be passed on to professors and staff concerned for further action. All these processes normally take 2-3 working days to complete, sometimes the processes were disrupted by accidental matters which will delay the completion.

The author had carefully interviewed the Administrative Officer and other staff concerned, the problems that disrupted the processes include.

1) So many emailed and documents, sometimes up to 20-30 emails per day. This causes missing important emails and documents.

2) No notification in MUSIS system and via e-mail and what so ever. The staff must login the MUSIS very often to check for updating. This disrupts the continuity or the flow of the work they are carrying on.

3) Only the General Administrator (Education role) can access to the MUSIS, if absent then all correspondences will be idle and slow down all consequences.

4) Even though the documents have already been submitted to the ITM Head, in some occasions it takes longer times for the ITM Head to consider and sign out, especially when is occupied with other works.

4.1.2 An Alternative of improvement:

The improvement for this function can be seen in the following three process separated diagram.

4.1.2.1 Incoming Document Process

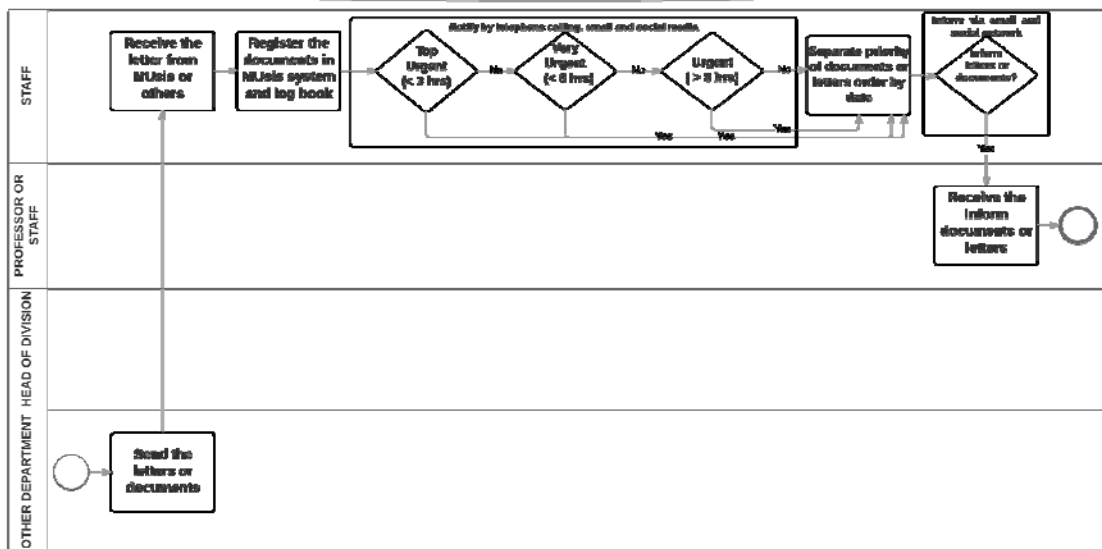


Figure 4.5 TO-BE Process of In-coming Documents and Letters Process Management

4.1.2.2 Outgoing documents Process

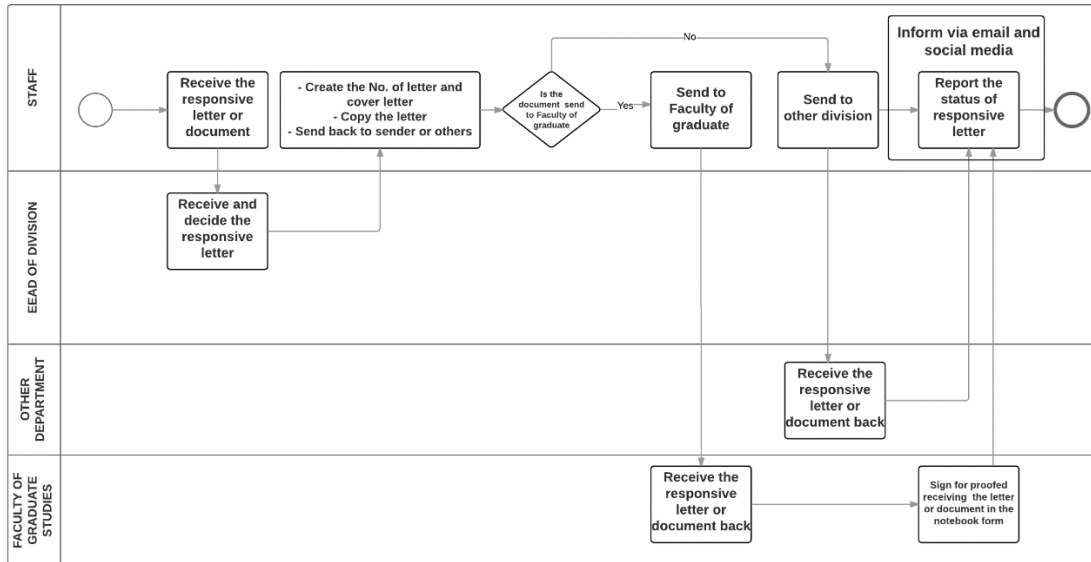


Figure 4.6 TO-BE Process of Out-going Documents and Letters Process Management

4.1.2.3 Destroying Document Process

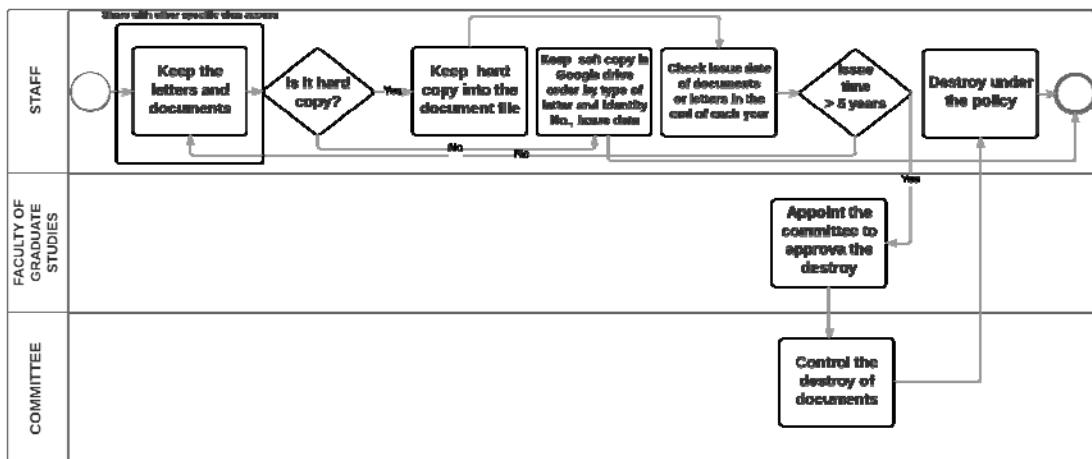


Figure 4.7 TO-BE Process of Destroying Document

According to the figure 4.5,4.6,4.7 above, the author would like to suggest the improvement for the Documents and Letters Process management in order to ease and smoothen all the process as follow.

1) Request for another MUSIS user name and log-in for ITM staff so that in case of absence or emergency, ITM staff can continue the work.

2) Request the MUSIS programmer to have the notifying system for new in-coming documents.

3) The Administrative Officer separates different files according to the degree of urgent: top urgent, very urgent, urgent matter. Then make a telephone call and email to the person in-charge for top and very urgent cases.

4) Upload all documents and letters into the Google Drive and keep them up to date all the time that all professors and staff can easily access for their necessary information.

4.1.3 Efficiency Evaluation of the documentary improvement

The evaluation was made for the documentation by using the checklist containing details of improvement. The checklist was given to the stake holder to fill out and evaluate. The result shows that the stake holder is satisfied with the change and confirms that the improvement can actually increase the efficiency of the documentation. The checklist is shown in the following table.

4.1.4 Audit Check list of documentary improvement

Table 4.1 Audit Check List for Documentary Process Management

Item No.	Audit Description	Separating files correctly & on-time	Separating files correctly but delay > 3hrs.	Separating files correctly but delay > 8hrs.	Incorrectly separating files	Mess up all document
1	The Administrative Officer separates different files according to the degree of urgent : top urgent, very urgent, urgent matter	5	4	3	2	1

Table 4.1 Audit Check List for Documentary Process Management (cont.)

Item No.	Audit Description	Make a phone call & e-mail immediately	Make a phone call & e-mail within 3 hrs.	Make a phone call & e-mail within 5 hrs.	Only make a contact via phone or e-mail	Failure of making any contact
2	The Administrative Officer make a telephone call and e-mail to the person in-charge for top and very urgent case.	5	4	3	2	1
Item No.	Audit Description	Everyday	Every 3 days	Weekly	Sometimes	Never
3	The Administrative Officer upload all documents in Google drive and keep in up to date all the time.	5	4	3	2	1

The audit check list should be used in July, the same time of staff annual evaluation.

4.2 Library Process Management

Currently, the library process management can be separated into 3 processes as follows:

- Ordering and delivering books
- Borrowing and returning books
- Destroying books

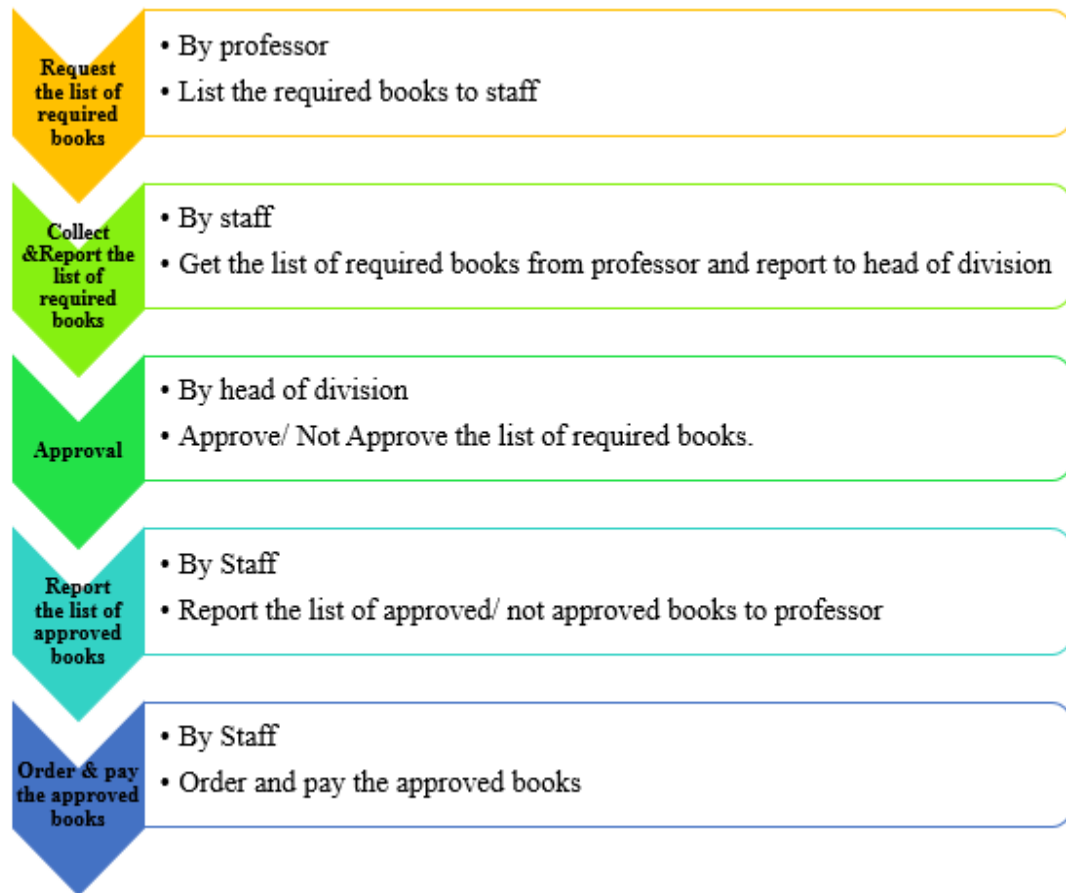


Figure 4.8 AS-IS Library Process Management: Order and pay the books.

Referring to the figure 4.8 above, Library Process Management, professors make the lists of required books and forward them to the Administrative Officer to collect and inform the ITM Head for approval. After the approval has been made, both approved and not approved lists of the books were acknowledged to the professors. The Administrative Officer then coordinates with budgeting division for placing the desired orders.

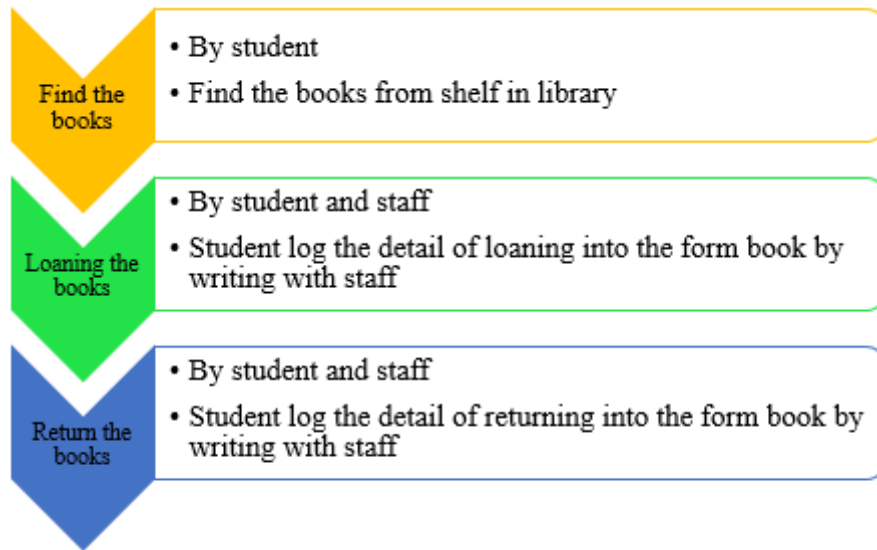


Figure 4.9 AS-IS Library Process Management: Borrow and return the books.

Figure 4.9 above shows the present Library Process Management: Borrowing and Returning books, students just simply fill in the borrowing form and pick up the books from the shelves in the library. The normal period of borrowing is 7 days. The returning procedure is completed by filling the returning form and place the books back to the shelves.

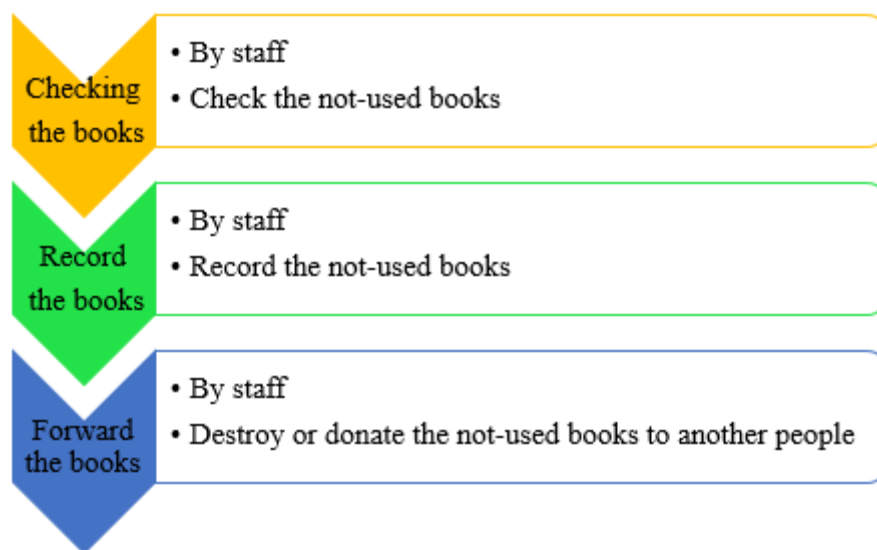


Figure 4.10 AS-IS Library Process Management: Destroy the books.

Figure 4.10 above shows the process of destroying old and out of date books which must be followed by the University regulation.

4.2.1 AS-IS Library Process Management

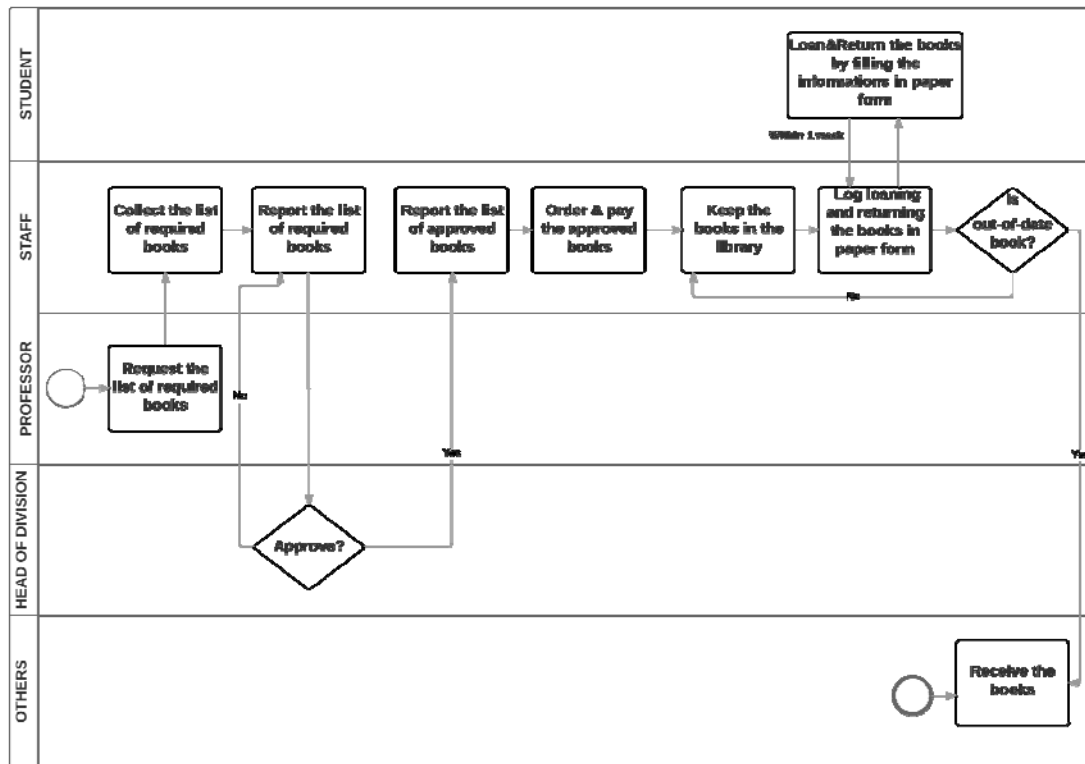


Figure 4.11 AS-IS Library Process Management

After making careful investigation on the ITM library, the following problems are found.

- 1) No plan is made for buying new books for the library, professors do not know when to place new book order, therefore they may not have enough time to choose the books effectively.
- 2) Not known in advance about new book budget, some good books may be missed.
- 3) Books are not collected in an appropriate system.
- 4) No late return tracking.
- 5) Some books were lost.

6) The evidence of borrowing is only a written note left on the shelf which is very difficult to trace.

7) No system for handling old books. This occupies more space and leaves small room for new books.

8) Lacking co-ordinations between person who responsible for the library and the person who responsible for purchasing.

4.2.2 An Alternative of improvement

The proposed alternative about the library management can be demonstrated as shown in the following figure.

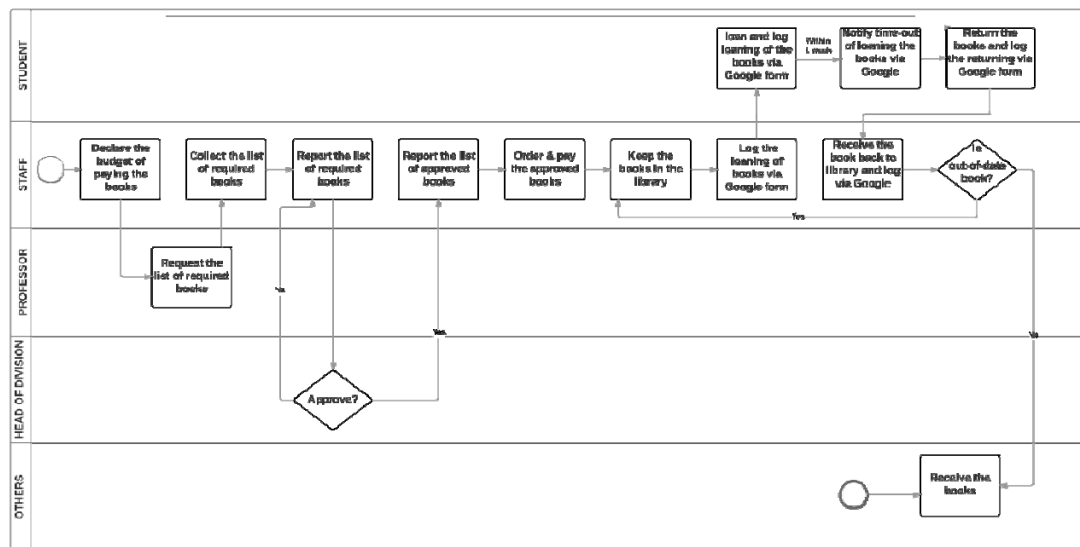


Figure 4.12 TO-BE Process of Library Process Management

According to the figure 4.12 above, the author would like to suggest the improvement for the Library Process management in order to ease and smoothen all the process as follow.

1) Replace the old-fashioned of filling the paper form by using the Google Form for both borrowing and returning books.

2) Trace and track the books via Google Calendar, notify students the returning time via Google Calendar.

3) For hard copy books, the barcode system should be implemented for registering books. This can avoid unnecessary form filling.

4) For saving library space, more digital books should be used to replace hard copy books.

After confirmation the alternative improvement of both Documents Process Management and Library Process Management with the stakeholders and staff concerned based on the result of interviewing all staff in charge. The stakeholder totally agree with the proposed alternative that has been offered.

4.2.3 Efficiency Evaluation of the documentary improvement

The evaluation was made for the library improvement by using the checklist containing details of improvement. The checklist was given to the stakeholders to fill out and evaluate. The result shows that the stakeholder is satisfied with the change and confirms that the improvement can actually increase the efficiency of the library services. The checklist is shown in the following table.

4.2.4 Audit check list of the library improvement

Table 4.2 Audit Check List for Library Process Management

Item No.	Audit Description	Everyday 5	Every 3 day 4	Weekly 3	Sometimes 2	Never 1
1	Checking the books, not used books					
2	Trace and track the books in library					
3	Record the not-used books					

The check list should be used in July, the same time of staff annual evaluation.

4.3 Evaluation

After confirmation the alternative improvement of both Documents Process Management and Library Process Management with the stakeholders and staff concerned based on the result of interviewing all staff in charge. The stakeholder totally satisfied with the proposed alternative that has been offered.

CHAPTER V CONCLUSIONS

5.1 Conclusion

ITM consists of several functions, only two of them (documentation and library works) can be improved for increasing the efficiency because they are not relied on other departments or divisions. The improvement can be done within the ITM alone. Therefore, they selected for this study.

Because the BPI was used in this investigation, therefore it is necessary to know details about the BPI criteria which are as follows.

- 1) Improving and delivering better business results
- 2) Reducing business costs
- 3) Reducing time waste
- 4) Reducing mistakes and reworks
- 5) Improving satisfaction

The followings show how BPI can be applied to the documentation and library improvement as follows.

5.1.1 Documentation Process Management

Table 5.1 Documentation Process Management Equivalent to BPI

Details of alternative improvement	Equivalent to BPI No.
Request for another MUSIS user name and log-in for ITM Head so that in case of absence or emergency, ITM Head can continue the work	BPI no.3 Reducing time waste
Request the MUSIS programmer to have the notifying system for new in-coming documents.	BPI no.1 Improving and delivering better business results

Table 5.1 Documentation Process Management Equivalent to BPI (cont.)

Details of alternative improvement	Equivalent to BPI No.
The Administrative Officer separates different files according to the degree of urgent: top urgent, very urgent, urgent matter. Then make a telephone call and email to the person in-charge for top and very urgent cases	BPI no.3,5 Reducing time waste Improving satisfaction
Upload all documents and letters into the Google Drive and keep them up to date all the time that all professors and staff can easily access for their necessary information	BPI no.3,4 Reducing time waste Reducing mistakes and reworks

5.1.2 Library Process Management

Table 5.2 Library Process Management Equivalent to BPI

Details of alternative improvement	Equivalent to BPI No.
Replace the old-fashioned of filling the paper form by using the Google Form for both borrowing and returning books.	BPI no.3,4 Reducing time waste Reducing mistakes and reworks
Trace and track the books via Google Calendar, notify students the returning time via Google Calendar.	BPI no.1 Improving and delivering better business results
For hard copy books, the barcode system should be implemented for registering books. This can avoid unnecessary form filling.	BPI no.3,4 Reducing time waste Reducing mistakes and reworks
For saving library space, more digital books should be used to replace hard copy books.	BPI no.2 Reducing business costs

5.2 Recommendation

The results of this study show that the BPI can increase the efficiency of the documentation and library services. However, the evaluation was carried out by interviewing stake holders alone because it is enough for this stage of improvement at ITM., It is recommend that the degree or magnitude of efficiency which can be done using a statistical method should be carried out for future investigation.

REFERENCES

- [1] Watcharee W., Business Process [cited 2016 December 21], Available from <http://home.kku.ac.th/wichuda/Knowledge/3SA/Business%20Process.pdf>.
- [2] The United Republic of Tanzania President's Office Public Service Mangement, Business process Improvement Guide, January 2012.
- [3] Department of Trade and Industry, Tools & Techniques for Process Improvement.
- [4] João A., Paula V.M., Silvia F., Marielba Z., Business Process Improvement on Maintenance Management :a Case Study, *Procedia Technology*9 (2013), pp320 – pp330, 2013.

APPENDICES

APPENDIX A AS-IS PROCESS

A.1 Correspondence: Letter and Documentary Process

Incoming Documentary Process Management : IT Management, Faculty of Engineering, Mahidol University

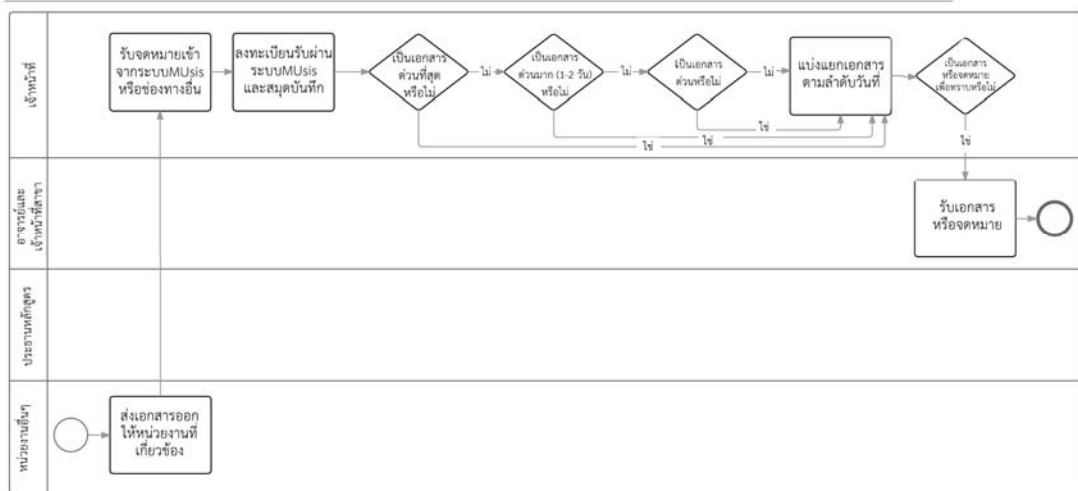


Figure A.1 Incoming Document Process

Outgoing Documentary Process Management : IT Management, Faculty of Engineering, Mahidol University

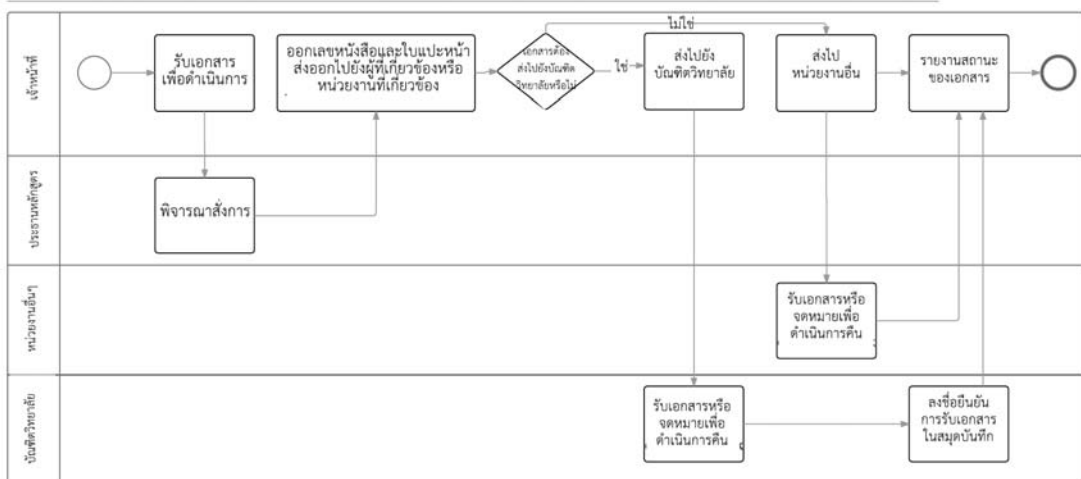


Figure A.2 Outgoing Document Process

Destroy Process Management : IT Management, Faculty of Engineering, Mahidol University

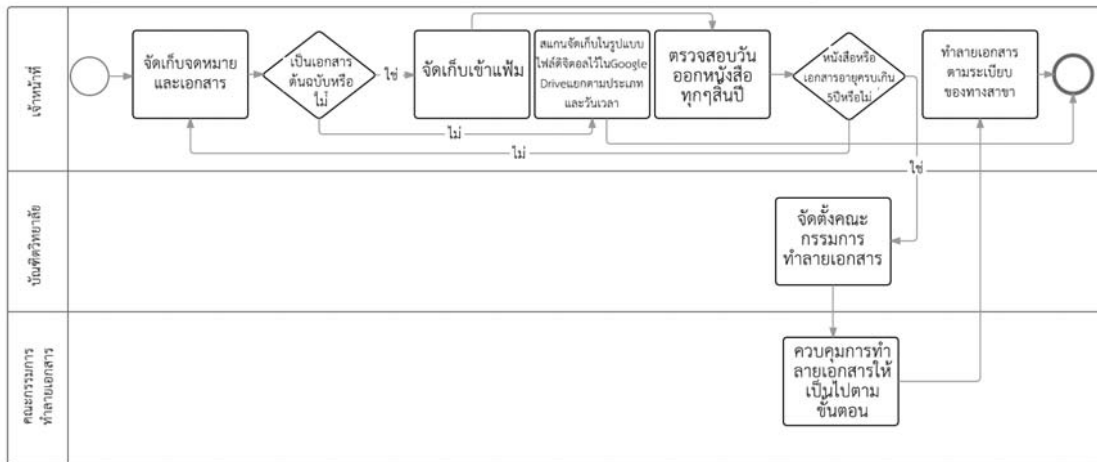


Figure A.3 Destroying Document Process

A.2 Library Process

Library Process Management : IT Management, Faculty of Engineering, Mahidol University

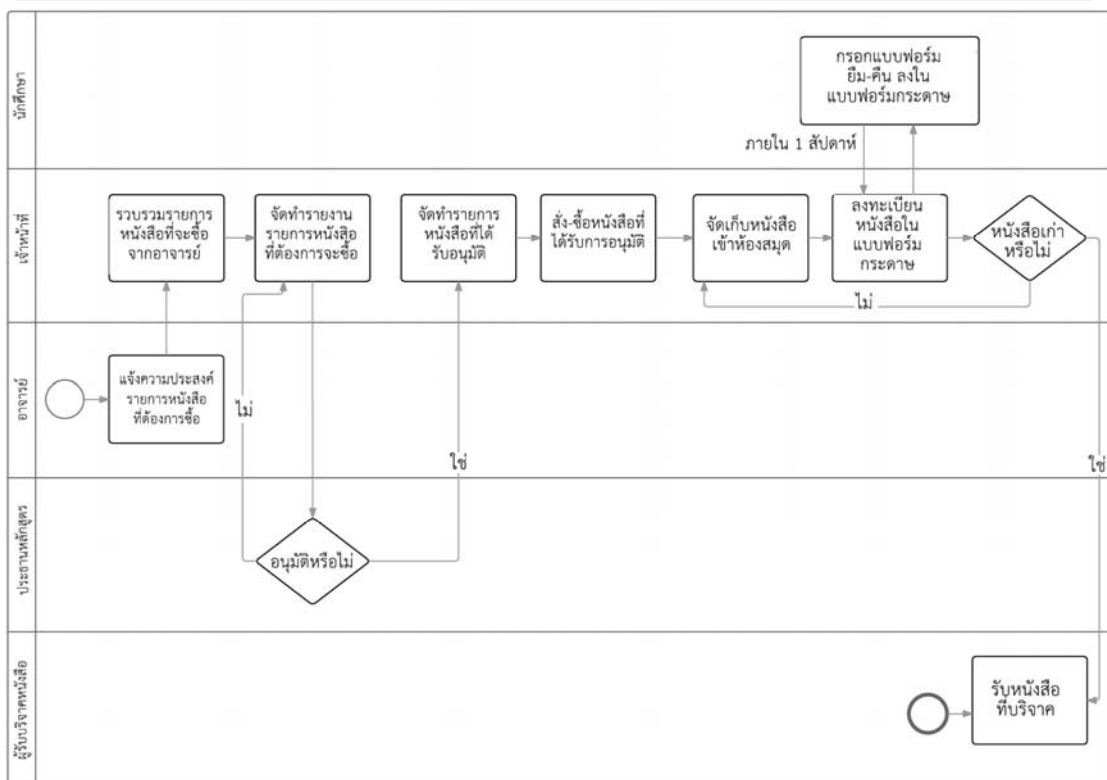


Figure A.4 Library Process

APPENDIX B TO-BE PROCESS

B.1 An Alternative of improvement for Letter and Documentation Process

Incoming Documentary Process Management : IT Management, Faculty of Engineering, Mahidol University

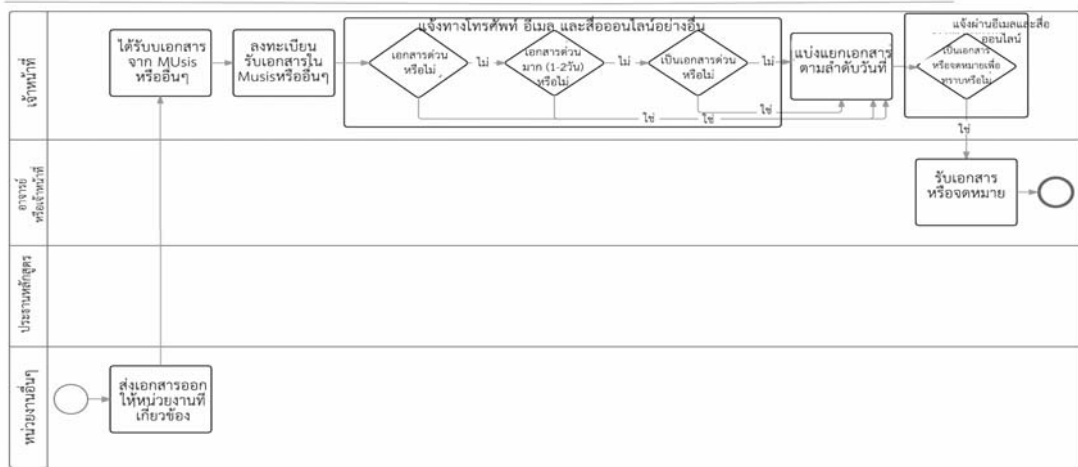


Figure B.1 TO-BE Process of In-coming Documents and Letters Process Management

Outgoing Documentary Process Management : IT Management, Faculty of Engineering, Mahidol University

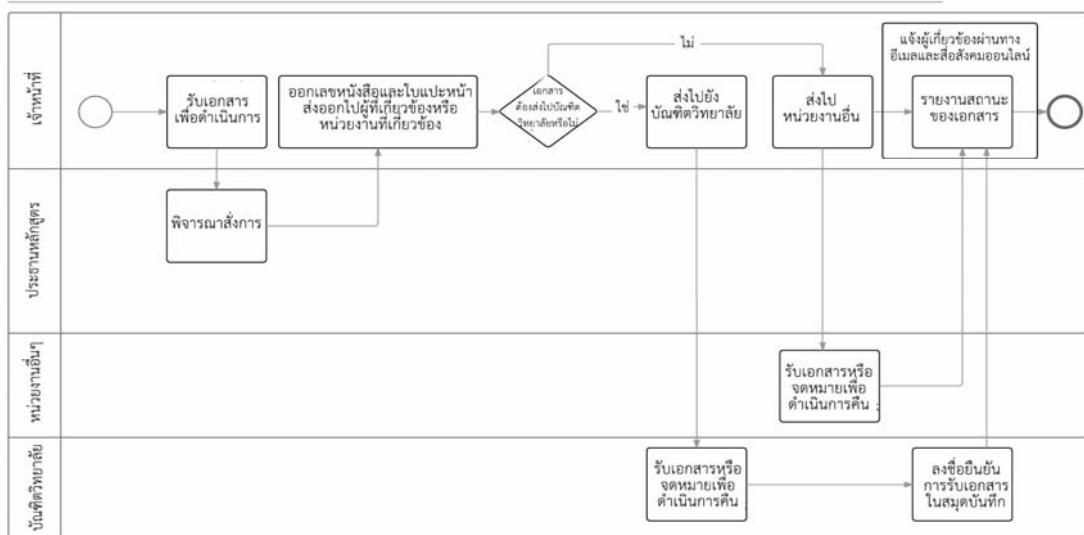


Figure B.2 TO-BE Process of Out-going Documents and Letters Process Management

Destroy Process Management : IT Management, Faculty of Engineering, Mahidol University

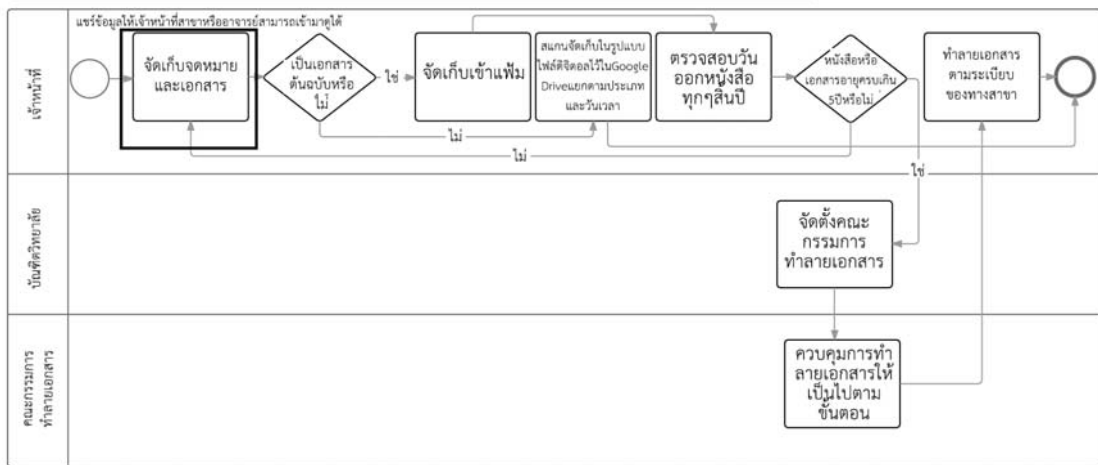


Figure B.3 TO-BE Process of Destroying Document

Table B.1 Audit Check List for Documentary Process Management

ลำดับที่	รายละเอียด	แยกเอก	แยกเอก	แยกเอก	แยกเอก	เอกสาร
	การตรวจสอบ	สารได้ถูก	สารได้ถูก	สารได้ถูก	สารไม่	ปะปน
		ต้องและ	ต้องแต่ใช้	ต้องแต่ใช้	ถูกต้อง	กัน
		ตรงเวลา	เวลามากกว่า 3 ชม.	เวลามากกว่า 8 ชม.		
		5	4	3	2	1

- เจ้าหน้าที่คัดแยกเอกสารตามลำดับความเร่งด่วน คือ
 - ด่วนที่สุด
 - ด่วนมาก
 - ด่วน

Table B.1 Audit Check List for Documentary Process Management (cont.)

ลำดับ ที่	รายละเอียดการ ตรวจสอบ	แจ้งทาง โทรศัพท์ อีเมล และ สื่อ ออนไลน์ ทันที	แจ้งทาง โทรศัพท์ และอีเมล ภายใน 3 ชั่วโมง	แจ้งทาง โทรศัพท์ และอีเมล ภายใน 5 ชั่วโมง	แจ้งทาง โทรศัพท์ หรืออีเมล อย่างไร อย่างหนึ่ง	ไม่ได้ แจ้งผ่าน ช่องทาง ใดๆ เลย
		5	4	3	2	1
2	เจ้าหน้าที่แจ้งผู้ เกี่ยวข้องทาง โทรศัพท์ อีเมล และ สื่อออนไลน์					
ลำดับ ที่	รายละเอียด การตรวจสอบ	ทุกวัน	ทุกๆ 3 วัน ทำการ	สัปดาห์ ละ 1 ครั้ง	บางครั้ง	ไม่ทำเลย
		5	4	3	2	1
3	เจ้าหน้าที่จัดเก็บ เอกสารตามหมวด หมู่ และเก็บในรูป แบบไฟล์อิเล็กทรอนิกส์ นิกเข้า Google Drive					

B.1 An Alternative of improvement for Library Process

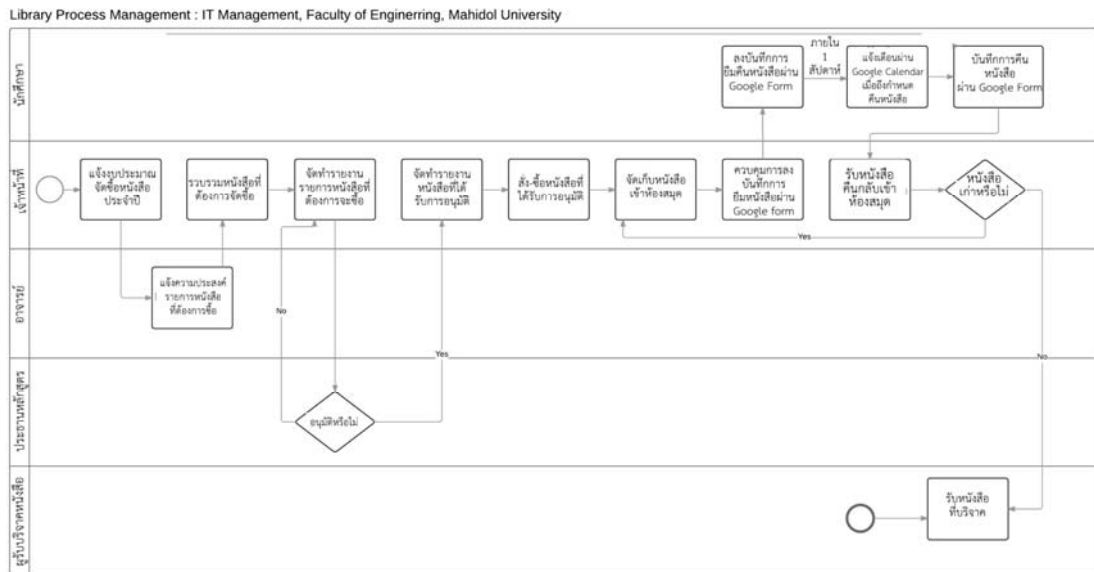


Figure B.4 TO-BE Process of Library Process Management

Table B.2 Audit Check List for Library Process Management

ลำดับ ที่	รายละเอียดการตรวจสอบ	ทุกวัน	ทุก 3 วัน	สัปดาห์	บางครั้ง	ไม่ทำเลย
		5	4	ละ 1 ครั้ง 3	2	1
1	ตรวจเช็คหนังสือในห้องสมุด					
2	ตรวจเช็คการยืมคืนหนังสือ					
3	จดรายชื่อหนังสือเก่า					

APPENDIX C

MANUAL

C.1 งานสารบรรณ

1. เจ้าหน้าที่งานสารบรรณทำการลงทะเบียนรับเอกสารเข้าผ่านระบบ MUSIS รวมทั้งจัดบันทึกลงสมุดทะเบียนรับหนังสือเข้า

2. เจ้าหน้าที่สารบรรณคัดแยกเอกสารตามลำดับความเร่งด่วน ได้แก่ ด่วนที่สุด ด่วนมาก และด่วน โดยแยกเรียงลำดับตามวันและเวลาที่รับเอกสาร พร้อมทั้งออกเลขรับหนังสือ

3. แยกแฟ้มเสนอเช่นต์เป็นเพื่อทราบ และเพื่อพิจารณา เพื่อนำเรียนประธานหลักสูตรฯ พิจารณาสั่งการต่อไป

3. เมื่อประธานหลักสูตรฯ พิจารณาสั่งการแล้ว ในกรณีของเอกสารเพื่อทราบ ให้ดำเนินการแจ้งผู้ที่เกี่ยวข้องตามขั้นตอนปกติ แต่ในกรณีเอกสารเพื่อพิจารณาสั่งการกรณี ด่วนที่สุด ด่วนมาก และ ด่วนนั้น ให้ปฏิบัติตามแนวทางดังนี้ กล่าวคือให้แจ้งผู้เกี่ยวข้องไม่ว่าจะเป็นอาจารย์หรือ พนักงานในหน่วยงานทางโทรศัพท์โดยทันที รวมทั้งแจ้งผ่านสื่อออนไลน์อื่น ที่สามารถติดต่อได้เพื่อผู้ปฏิบัติจะได้รับทราบข้อมูลได้ทันเวลา และครบถ้วน

4. เมื่อเสร็จสิ้นขั้นตอนของเอกสารออกแล้วให้ลงบันทึกการออกของเอกสารในระบบ MUSIS ลงบันทึกในสมุดทะเบียนหนังสือออก และให้แสกนเอกสารดังกล่าวในรูปแบบไฟล์ดิจิทัลจัดเก็บไว้ใน Google Drive แยกตามหมวดหมู่ วันเวลา แשרข้อมูลเพื่อที่เจ้าหน้าที่ท่านอื่น หรืออาจารย์สามารถเข้าไปสืบค้นข้อมูลได้ และถือเป็นข้อปฏิบัติที่จะต้องปรับปรุงข้อมูลให้เป็นปัจจุบันอยู่เสมอ เพื่อในกรณีเจ้าหน้าที่สารบรรณไม่สามารถมาปฏิบัติหน้าที่ได้ เจ้าหน้าที่ในกลุ่มสาขาฯ ท่านอื่น หรือ คณาจารย์สามารถเข้าไปสืบค้นข้อมูลได้ การดำเนินงานภายในสาขาฯ จะได้ไม่ติดขัด

5. ตรวจสอบเอกสารเข้าและออกทั้งหมดทุกๆ สิ้นปี หากเอกสารดังกล่าวมีอายุเกิน 5 ปี ให้ดำเนินการตามทำลายตามขั้นตอนของกลุ่มสาขาฯ โดยให้เป็นไปตามระเบียบของบัณฑิตวิทยาลัย

แบบฟอร์มรับเอกสาร จดหมายราชการ

IT Management คณะวิศวกรรมศาสตร์ มหาวิทยาลัยมหิดล

วันที่รับ

คำตอบของคุณ

ชื่อเอกสารที่รับ

คำตอบของคุณ

ชื่อผู้รับ

คำตอบของคุณ

ประเภทความเร่งด่วน

Top Urgent (< 3 hrs)

Very Urgent (< 8 hrs)

Urgent (> = 8hrs)

Not Urgent

แนวทางดำเนินการต่อ

คำตอบของคุณ

ชื่อผู้รับผิดชอบงาน หรือได้รับมอบหมายต่อ

คำตอบของคุณ

ส่ง

ห้ามส่งที่ผ่านใน Google ฟอร์ม

เนื้อหาที่นี่ได้ถูกสร้างขึ้นหรือรับรอง โดย Google รายงานการละเมิด - ข้อกำหนดในการให้บริการ - ข้อกำหนดเพิ่มเติม

Google ฟอร์ม

Figure C.1 Google Form for Documentation

C.2 งานบรรณารักษ์

1. ในการยืมคืนหนังสือให้ใช้ Google Form แทนฟอร์มกระดาษแบบเก่า โดยนักศึกษากรอกรายละเอียดชื่อ นามสกุล ชื่อหนังสือ และจำนวนเล่มที่ต้องการยืม วันที่ยืม
2. แจ้งเตือนผ่าน Google Calendar เมื่อครบกำหนดส่งคืนหนังสือ
3. จัดเก็บหนังสือตามหมวดหมู่ และตรวจสอบจำนวนในห้องสมุดให้ตรงกับการยืมคืน
4. ตรวจสอบและจัดรายชื่อนี้หนังสือเก่าเป็นประจำปีทุกปี หากเป็นหนังสือเก่าเนื้อหาไม่ทันสมัยให้ดำเนินการบริจาคต่อไป

แบบฟอร์มยืมคืนหนังสือ

ห้องสมุด IT Management คณะวิศวกรรมศาสตร์ มหาวิทยาลัยมหิดล

ชื่อ - นามสกุล
คำตอบของคุณ

ชื่อหนังสือที่ยืม, จำนวนเล่ม
คำตอบของคุณ

วันที่ยืม
คำตอบของคุณ

วันที่ต้องคืน
คำตอบของคุณ

ส่ง

ห้ามส่งรหัสผ่าน ใน Google ฟอร์ม

เนื้อหาไม่มีได้ถูกสร้างขึ้นหรือรับรอง โดย Google รายงานการละเมิด - ข้อกำหนดในการให้บริการ - ข้อกำหนดเพิ่มเติม

Google ฟอร์ม

Figure C.2 Google Form for Library

BIOGRAPHY

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PUBLICATION / PRESENTATION	-