

FORMULATION OF KEY PERFORMANCE INDICATORS THROUGH
IMPLEMENTATION OF PRIVATE FINANCE INITIATIVES (PFI)
IN STUDENT HOSTEL PRIVATISATION AT
UNIVERSITI TEKNIKAL MALAYSIA MELAKA

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SPECIALLY DEDICATED TO

My Parents

Hj. Anang Masuri Bin Hj. Ahmad Basri

Hjh. Kamaliah Binti Hj. Munajat

Hjh. Siti Kechik Binti Sheikh Awab

“You have done all the best for my life”

My Wife

Rozie Sabrina Binti Ismail

“Thank you for your love & supports”

My Childrens

Muhammad Adam Iskandar

Muhammad Amir Iskandar

‘Umairah Yasmin

“You’re the heart of my life”

“I hope you all will be success and may Allah bless you peaceful life”

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ABSTRACT

Student hostel is one of the critical types of facilities provided in a University. It can be a second home for the students and they pay for the facilities and related services. They always want the facilities offered by the University to be of highest quality condition and service level. University management should understand that user satisfaction is a critical factor that sustain the service and also generate extra money for them. Therefore to keep their business growth, they have to maintaining their property as well as fulfilling user needs. Since Universiti Teknikal Malaysia Melaka (UTeM) inception in year 2000, UTeM has experienced a steady growth of the student enrolment. In spite of the increasing intake of students, the University, however, is still unable to provide adequate student accommodation in the main campus. There is an urgent need for the university to study the critical aspects of facility and maintenance management in the hostel privatisation through Private Finance Initiatives (PFI). Formulation and incorporation of Key Performance Indicators (KPI) in the privatisation will by itself create self-regulation for the concession company to design, construct and maintain the building professionally. Indirectly, the objective of PFI in setting an ideal risk distribution between the Government and the private sector could be achieved.

ABSTRAK

Asrama pelajar merupakan kemudahan kritikal yang perlu disediakan oleh pihak Universiti. Ianya menjadi rumah kedua kepada pelajar dan mereka membayar untuk mendapat kemudahan tersebut. Kemudahan asrama dan sokongannya perlulah disediakan dengan kualiti yang tinggi pada setiap masa. Pihak Universiti amat memahami bahawa kepuasan pengguna akan menjana pendapatan kepada Universiti. Oleh yang demikian, di dalam memastikan peningkatan di dalam penjanaan pendapatan, Universiti perlulah menyelenggara bangunan asrama sebagaimana kehendak pengguna. Sejak pengwujudan Universiti Teknikal Malaysia Melaka (UTeM) pada tahun 2000, UTeM telah melalui peningkatan pelajar yang memberangsangkan. Namun demikian, sehingga kini Universiti masih belum dapat menyediakan penempatan asrama pelajar di dalam kawasan kampus. Oleh itu, sekarang adalah, masa yang bersesuaian untuk Universiti mengkaji aspek pengurusan fasiliti dan penyelenggaraan di dalam penswastaaan asrama melalui Inisiatif Pembiayaan Swasta (PFI). Formulasi dan penggabungan Petunjuk Prestasi Utama (KPI) di dalam penswastaaan asrama dengan sendirinya akan mewujudkan peraturan sendiri kepada syarikat konsesi (pemaju) untuk merekabentuk, membina dan menyelenggara bangunan secara lebih profesional. Secara tidak langsung objektif pelaksanaan penswastaaan secara PFI untuk mengagih risiko yang ideal di antara Kerajaan dengan pihak swasta akan tercapai.

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LIST OF ABBREVIATIONS

BS	-	British Standard
CC	-	Consultant Cost
CtC	-	Construction Cost
DB	-	Distribution Board
DC	-	Development Costs
DLP	-	Defects Liability Period
EC	-	Equipment Cost
EPU	-	Economic Planning Unit
FKE	-	Faculty of Electrical Engineering
FKEKK	-	Faculty of Electronics and Computer Engineering
FKM	-	Faculty of Mechanical Engineering
FKP	-	Faculty of Manufacturing Engineering
FPTT	-	Faculty of Technology Management and Techno-preneur
FTMK	-	Faculty of Information and Communication Technology
HC	-	Housekeeping Cost
JPAK	-	Government Asset Management Committee
KPI	-	Key Performance Indicators
KSN	-	Government Secretary General
KUTKM	-	Kolej Universiti Teknikal Kebangsaan Malaysia

LC	-	Land Cost
LCC	-	Life Cycle Cost
LV	-	Low Voltage
MC	-	Management Cost
MCB	-	Miniature Circuit Breaker
MOF	-	Ministry Of Finance
MOHE	-	Ministry Of Higher Education
MP	-	Malaysia Plan
MSB	-	Main Switch Board
MtC	-	Maintenance Cost
NAFAM	-	National Facility And Asset Management
NPV	-	Net Present Value
OC	-	Other related development cost
OSC	-	Other related operational and service cost
PA	-	Public Address
PFI	-	Private Finance Initiatives
PLUS	-	Projek Lebuhraya Utara Selatan
PWD	-	Public Works Department
PWTC	-	Putra World Trade Centre
SC	-	Service Costs
SF	-	Sinking Fund
SMS	-	Short Message Services
SPV	-	Special Purpose Vehicle
TTU 3	-	Taman Tasik Utama 3
TTU2	-	Taman Tasik Utama 2
UC	-	Utility Cost

UiTM	-	Universiti Teknologi MARA
UKAS	-	Public Private Partnership Unit
UKM	-	Universiti Kebangsaan Malaysia
UPM	-	Universiti Putra Malaysia
UTeM	-	Universiti Teknikal Malaysia Melaka
UTM	-	Universiti Teknologi Malaysia

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CHAPTER 1

INTRODUCTION

1.1 Introduction

Recently, the issues of facility management in Malaysia have been the focus of the relevant authorities and the public in general. A number of failures of public properties have affected the reputation of the relevant agencies in delivering quality services to the people. The transparent discussions and pro-active efforts are crucial resolution of problems and the development of the most effective facility management mechanism. Ultimately, the outcome would be the continuous improvement towards service delivery of the Government to the people.

Since 2005, the Malaysian Government had started to implement Private Finance Initiatives (PFI) in 9th Malaysia Plan. However the Government had yet to make public the details of procurement strategy and framework process for the commission of PFI schemes.

On 13th and 14th August 2007, the National Facility and Asset Management 2007 (NAFAM 2007) Convention was held at Putra World Trade Centre (PWTC), Kuala Lumpur. Government Secretary General (KSN) had mentioned that the Government has given the ministries and agencies jurisdiction and responsibility over the management of their asset and facilities. Under the 9th Malaysia Plan the maintenance of facilities is included in the concession agreements of privatised infrastructure projects. The PFI specifies the private sector's responsibility in the construction, management, maintenance, refurbishment and replacement of public sector assets.

Implementation of PFI clearly reflects the Government's commitment and mechanism in ensuring the facilities are upgraded, maintained and effectively managed. The PFI is a constructive approach to monitoring and preventive maintenance. It is important to inculcate to the public the maintenance culture that regards maintenance as an integral part of projects, and not treating it as a peripheral function. The cost of maintenance of assets must be factored so that all projects and purchases of assets take account of the maintenance cost.

In PFI, performance measurement should be put into effect to further enhance and fast track implementation of facility management systems. Key Performance Indicators (KPI) can be used to improve the process of maintenance and monitoring of the projects.

1.2 Background of Study

The issue of quality in construction is not new in Malaysia, especially so with the increasing number and capacity of construction in public institutions of higher learning. There should be performance measurements to further enhance and fast track implementation of project and asset management systems. For this purpose, establishing Key Performance Indicators will further guide the improvement process.

To ensure the user's satisfaction on the facilities provided, the owner or operator of the building must keep the building in good condition at all times. Besides keeping the structure of the building in a sound condition, the services of the building such as, electricity and water supply, decoration and cleaning, air conditioning and ventilation and accessibility are also important.

There is still a general lack of the right maintenance culture in our construction industry whereby maintenance is treated as a secondary status. It is often accorded less priority as opposed to physical structure and infrastructure development. In NAFAM 2007, Chief Secretary to the Government, emphasised the importance of applying the maintenance culture, whereby maintenance is regarded as an important and an integral part of projects. It must factor in the cost of maintenance of assets and budget for it. Therefore, all projects and purchases of assets must include the cost of maintenance.

British Standard (BS 3811: 1984) classified maintenance in three parts as follows:

- i. Planned maintenance – described as organised maintenance and carried out with forethought, control, and the use of records to predetermined plan.

- ii. Preventive maintenance – it is carried out at predetermined or to other prescribed criteria and intended to reduce the likelihood of an item not meeting an acceptable condition.
- iii. Running maintenance – which can be carried out whilst an item is in service.

Universiti Teknikal Malaysia Melaka presently in a process of getting approval from the Government Central Agency to construct student hostel in its campus. *Pejabat Pembangunan dan Pengurusan Aset* is a department in-charge of the study on the implementation of privatisation and maintenance aspects in construction of the student hostel. By incorporating Key Performance Indicators in the privatisation concession agreement, the self regulation to control the quality of construction and efficiency of maintenance services will create a new dimension of construction and maintenance industry in Malaysia in general.

This short study is a pro-active attempt to identify the issues and shortcomings in the current facility and maintenance management system and practice. The collection and analysis of acquired survey data as well as local data on the running of current hostel facilities would help to identify key areas of concern and key performance indicators for major works involved. The findings and outcome of the study are expected to assist the University to better plan, design and implement PFI for its future student hostel projects.

1.3 Development of Universiti Teknikal Malaysia Melaka

Universiti Teknikal Malaysia Melaka (UTeM) is a Public Institution of Higher Learning under Ministry of Higher Education Malaysia. The Cabinet Meeting on the 27th September 2000 had approved the establishment of Kolej Universiti Teknikal Kebangsaan Malaysia (KUTKM) under Section 2 of University & University College Act 1971. The formation of the University College was made effective from 1st December 2000. In 2007 the University College was upgraded and re-named as Universiti Teknikal Malaysia Melaka to reflect with Government's aspiration to produce highly skilled and effective professional technical human resources to serve the needs of the nation.

The Universiti Teknikal Malaysia Melaka operates on its well-thought vision and mission that underpins its core function and role and reflects its aspiration as follows:

Vision

To be One of the World's Leading Innovative and Creative Technical Universities

Mission

To Produce Highly Competent Professionals through Quality and World Class Technical University Education based on Application-Oriented Teaching, Learning and Research with Smart University-Industry Partnership in line with National Aspirations

Motto

Excellence through Competency



Figure 1.1: Chancellery Building of the Universiti Teknikal Malaysia Melaka

The construction of its main campus at Durian Tunggal, Alor Gajah was started with Package 1: Earthworks in year 2002 with contract amount RM37.14 million. Package 2 was a fast-track Direct Negotiation-Design & Build Contract where the ultimate amount approved by the Ministry Of Finance Malaysia was RM583.37 million. However due to budget constraint in 8th Malaysia Plan (2001 – 2005) the construction of Package 2 was only partly implemented. Construction of Package 2A with allocation of RM208.0 million was started in 2003 and comprised of infrastructure, administration and laboratory buildings for two faculties namely Faculty of Electronics & Computer Engineering and Faculty of Electrical Engineering and also the Student Cafeteria 1. The construction of Package 2A was completed in January 2005. The Defects Liability Period (DLP) of Package 2A was for 24 months.

In the 9th Malaysia Plan (2006 – 2010), the construction of Package 2B(i), Package 2B(ii) and Package 2C was started in year 2006. These packages with allocation of RM247.63 million were part of negotiated contract sum. The total construction of UTeM is as shown in Figure 1.2.

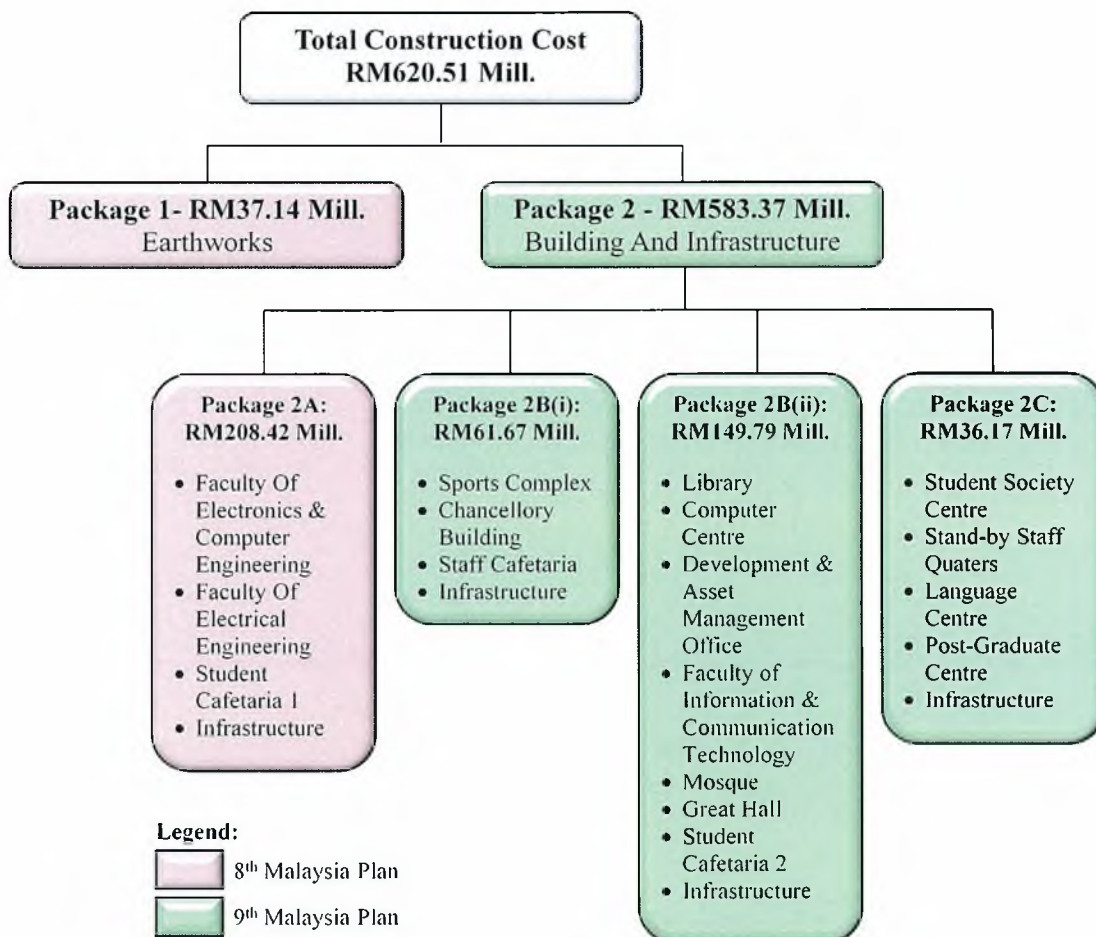


Figure 1.2: Development phase of Universiti Teknikal Malaysia Melaka campus
 (Source: *Pejabat Pembangunan dan Pengurusan Aset, UTeM*)

The current development of UTeM is taking place on 765.98 acres (309.98 hectares) in Mukim Durian Tunggal, Alor Gajah, Melaka. Precisely, the project site is located on the left side of the North-South highway (southbound), opposite the Ayer Keroh toll plaza, as shown in Figure 1.3.

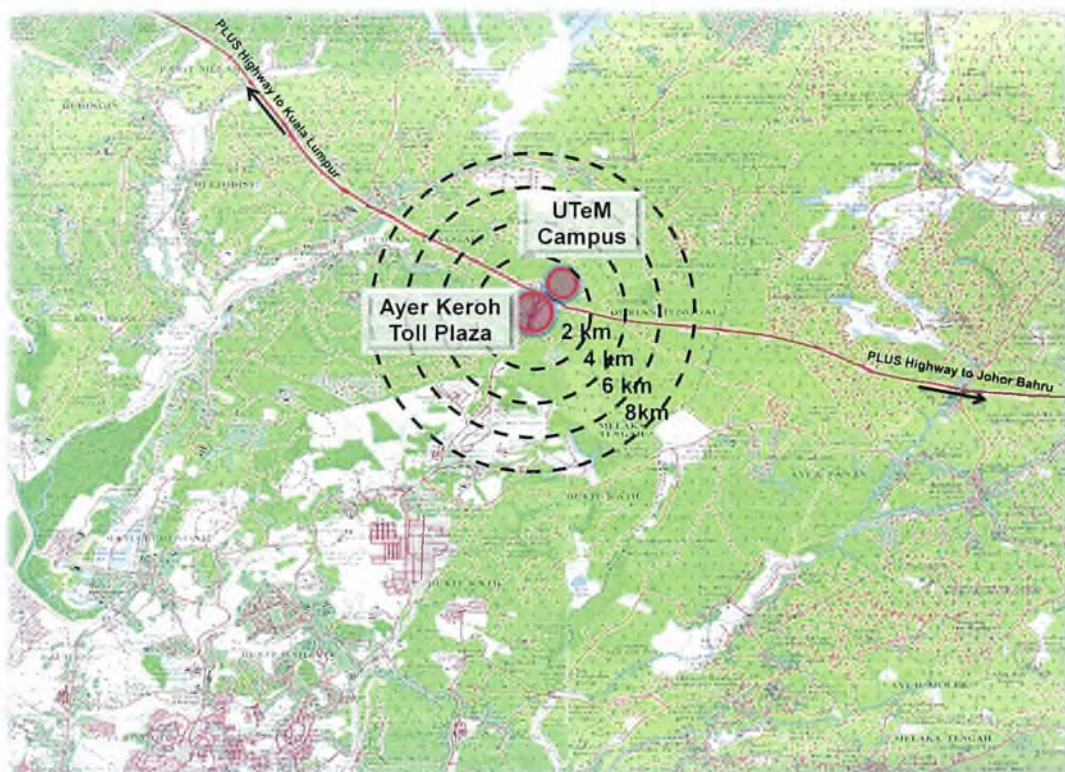


Figure 1.3: Universiti Teknikal Malaysia Melaka location plan

1.4 Problem Statement

At the beginning of 8th Malaysia Plan, student hostel was listed in the UTeM main campus development planning. However, in year 2002 UTeM was instructed to construct the student hostel project separately through implementation of privatisation concept.

Currently, UTeM rented four residential blocks to accommodate the students. They are link/terrace houses in Taman Tasik Utama 2 (TTU 2) and Taman Tasik Utama 3 (TTU 3). The hostels are multi storey buildings namely Pangsapuri Bunga Raya, Ayer Keroh and Pangsapuri Bukit Beruang Murni at Bukit Beruang, Melaka.

Since its inception in year 2000, UTeM has experienced a steady growth of the student enrolment. Currently, UTeM has 6,500 students of which 3,325 are staying in hostels provided by UTeM. In spite of the increase in student population, the university is still unable to provide adequate accommodation to the students in its main campus.

As part of its effort to provide high quality service and ensure customer satisfaction, UTeM is conducting a university-wide survey to obtain feedbacks from students on hostel facilities and associated services. The feedback data would serve as a basis for the University to study and better understand student's expectations and translate them into service improvement action. So far, studies related to the satisfaction of students with the services and facilities provided in the hostels have only been undertaken in the form of complaint and repair records. As such, the management of UTeM should strive to know and understand its students' expectation and perception on the quality of accommodation provided to the students. This will enable UTeM to its effort towards providing a conducive and comfortable accommodation and thus, achieve the satisfaction of its main customer, the students.

1.5 Objectives of the Study

The aim of the study is to formulate a set of Key Performance Indicators (KPI) for facility and maintenance management activities in student hostel privatisation at Universiti Teknikal Malaysia Melaka (UTeM) in Private Finance Initiatives (PFI) contract.

The objectives of the study are as follows:

- i. To identify issues and challenges in current facility and maintenance management system at UTeM's student hostel;
- ii. To propose a set of KPI in facility and maintenance management of student hostel in PFI contract; and
- iii. To develop the scope* of facility management and maintenance works in pre-bid documents.

* 'Scope' refers to Government buildings which is the project value more than RM5.0 million or any renovation works to the existing or rented private buildings which the value of the works more than RM1.0 million. It is also consider generic buildings to facilitate its comprehensive utilisation inclusive of any building projects, as defined by the Economic Planning Unit (EPU) of the Prime Minister's Department.

1.6 Scope of Study

The scope of this study is focused on the two rented student hostels, the Pangsapuri Bunga Raya at Ayer Keroh and Pangsapuri Bukit Beruang Murni at Bukit Beruang. The study covers multi-storey hostel buildings with the purpose to simulate similar facility and maintenance management conditions at student hostels in the campus.

1.7 Research Methodology

To carry out the study, certain methods and process have to be performed to ensure that the objectives of the research achieved successfully. The method includes literature review, data collection, problems identification, knowledge acquisition and analysis technique. Figure 1.4 shows the general flow diagram of methodology of the study.

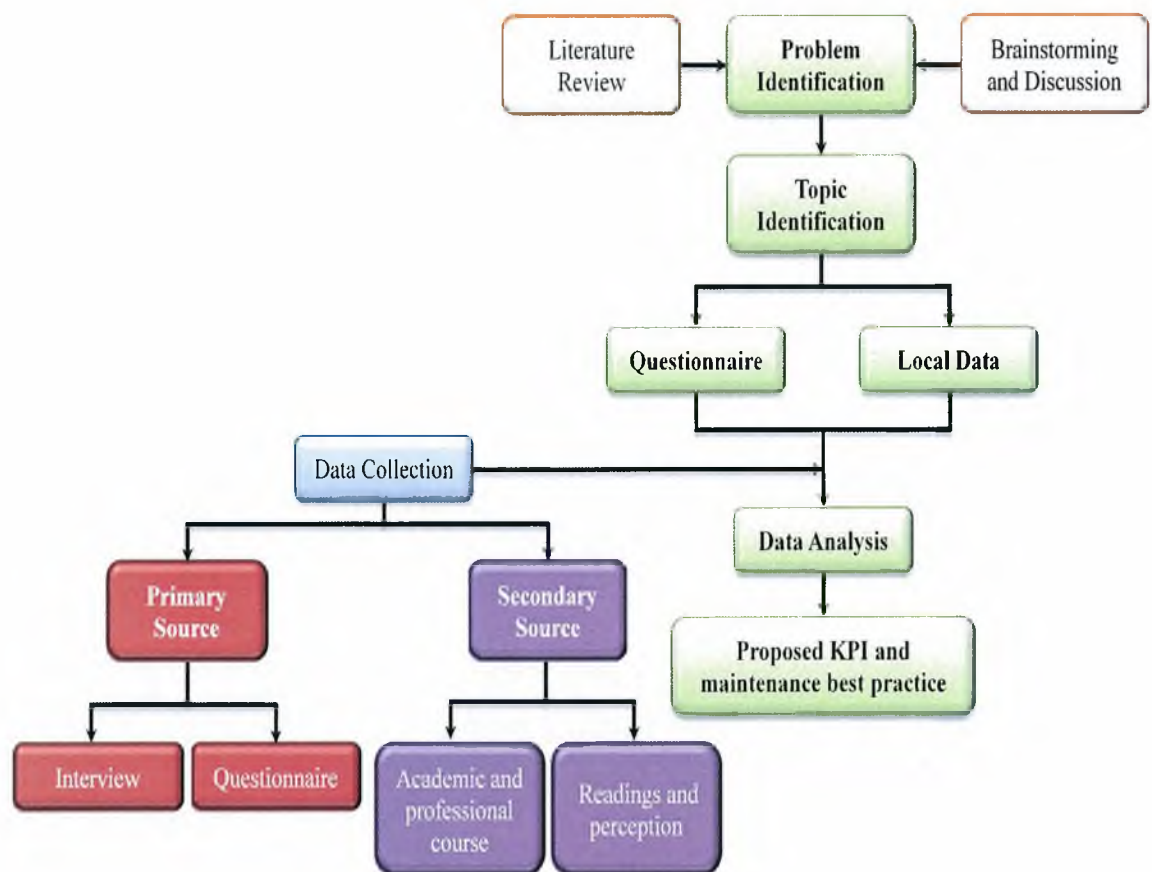


Figure 1.4: Research methodology flow diagram

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