





# ChaMS [Chalet Management System]



Creation, Innovation, Technology and Research Exposition (CITREX) | 12<sup>th</sup> - 13<sup>th</sup> February 2020

## ABSTRACT

The constant growth of tourism industry in Malaysia has led to the rise of the hospitality industry over recent years. The major tourism SMEs are usually providing the needs or demand of tourists such as food, accommodation, transportation and other necessities. This paper focuses on the issues of poor customer satisfaction and operation performance that occur in a small and medium scale hospitality company and the ways to solve the problem by developing a prototype of ChaMS. The five whys analysis was used to identify the problems that occur in the hospitality company. The prototype of ChaMS is developed by using Rapid Application Development (RAD) technique with Microsoft Access. This study showed that the ChaMS had improved their customer satisfaction and operation performance by decreasing the registration process lead time and improving the data accuracy and efficiency. The proposed system also received positive feedbacks with its functionalities from the company.

## RESEARCH PROBLEM



Faced the difficulties of satisfying their customers and ended up with poor customer satisfactions.

## RESEARCH OBJECTIVES

- 01 To investigate the factors that affecting poor customer satisfaction in ABC Chalet.
- 02 To enhance the registration process lead time of ABC Chalet by a prototype of ChaMS.
- 03 To improve customer's data accuracy and efficiency of ABC Chalet by a prototype of ChaMS.

## RESEARCH METHODOLOGY

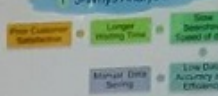
5-Why Analysis

Rapid Application Development

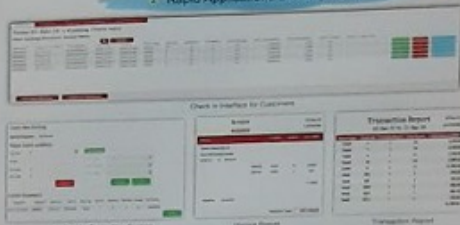


## RESULT

### 1. 5-Whys Analysis



### 2. Rapid Applications Development



### 3. Time Study

Time Study (Customer Reservation Earlier)

Customer Check in (Reservation Earlier)	Current Cycle Time (min)	By using ChaMS
Customer Check in (Reservation Earlier)	1	1
Check in Customer	80	80
Present Customer ID card	10	10
Find the Customer Name	20	20
Confirm the details with Customer	30	30
Let the details of Customer	40	40
Calculate the total payment	50	50
Collect the cash from Customer	60	60
Give them key and Present to Customer	70	70
Total cycle time (min)	240	240
Total cycle time (min)	240	240

Time Study (Walk in Customer)

(Walk in Customer)		Current Cycle Time (min)	
	1	2	
Customer Check in (Walk in Customer)			
According to Customer	80	80	
Check the availability of room	10	10	
Received Customer ID card from Mobile for Present the Customer Data	10	10	
Calculate the total payment	10	10	
Collect the cash from customer	10	10	
Give the receipt with a green receipt Book	10	10	
Check Return Key and Present to Customer	10	10	
Total cycle time (min)			
Total cycle time (min)			

## CONCLUSION

- A prototype of ChaMS was successfully developed to automate the process of bookings and customer registrations.
- Provide better quality of registration service.
- Tracking of records can be done easily.

## MARKETABILITY / COMMERCIALIZATION

- ChaMS is a simple system that able to customized based on the needs of small and medium enterprise.

237-D





**Chalet Management System**

ITEX Exhibit Category:  
**Household & Office Products**

## INVENTION FEATURES

Booking ID	Customer Full Name	IC ID	From Date	To Date	Room Type	Room No	Adult/Child	Check-in Status	Check-in Date Time
BK000001	Jee Han Lim	940000000001	2019-12-07	2019-12-08	Chalet	10	10	No	2019-12-07 10:00:00
BK000002	Jee Han Lim	940000000002	2019-12-07	2019-12-08	Chalet	8	10	No	2019-12-07 10:00:00
BK000003	Jee Han Lim	940000000003	2019-12-07	2019-12-08	Chalet	9	10	No	2019-12-07 10:00:00
BK000004	Jee Han Lim	940000000004	2019-12-07	2019-12-08	Chalet	7	10	No	2019-12-07 10:00:00
BK000005	Jee Han Lim	940000000005	2019-12-07	2019-12-08	Chalet	6	10	No	2019-12-07 10:00:00

Figure 1: Check in Interface for Customers

## APPROACH

Rapid Applications Development

Figure 2: Interface for Create New Booking

Room No	Room Type	Room No	Amount (RM)
Chalet Room No 10	Chalet	10	1,400.00
Chalet Room No 8	Chalet	8	1,400.00
Chalet Room No 9	Chalet	9	1,400.00
Chalet Room No 7	Chalet	7	1,400.00
Chalet Room No 6	Chalet	6	1,400.00
Total			RM 1400.00

Figure 3: Invoice Report

Room Type	Room No	Total Booking(s)	Total Amount (RM)
Chalet	6	16	4,500.00
Chalet	7	20	4,200.00
Chalet	8	12	3,360.00
Chalet	9	10	2,800.00
Chalet	10	75	15,400.00
Hotel	002	2	240.00
Hotel	004	2	240.00
Hotel	0250	2	400.00
Hotel	0251	2	400.00
Hotel	0252	2	120.00
Total			31,480.00

Figure 4: Transaction Report

## Research

# Ts. Dr. Lee Khai Loon creates specially designed chalet management system for hotel industry

11 May 2021

A lecturer from the Faculty of Industrial Management (FPI), Universiti Malaysia Pahang (UMP), Ts. Dr. Lee Khai Loon, 34, has created a research product called ChaMs.

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According to the Penangite, ChaMS is a chalet management system based on a special design for small and medium enterprises (SMEs) in the hotel industry.

“This software is easy to use and involves low cost and affordable for SMEs.

“It is also user friendly and only requires minimal computer skills.

“The ChaMS prototype was produced using rapid application development (RAD) techniques through Microsoft Access,” he said.

He added that ChaMS can improve the accuracy and efficiency of data management and even speed up processing time.

“At the same time, it improves operational performance and overall customer satisfaction compared to conventional methods in processing and managing data.

“This research started in September 2019 and was completed within a year for a trial run.

“The idea to produce this study is based on my experience while staying in several small and medium chalets and hotels,” he said.

His research was conducted with a FIM final year student, Lim Xue Ting.

He added ChaMS automates the customer data management process involving booking management, registration, payment, invoice printing, and transaction reports generation.

“The current ChaMS design focuses on internal management.

“Therefore, the next step is to combine website functionalities to enable direct interaction with customers.

“ChaMS offers a promotional price of RM500 one-off purchase and is made based on the needs of consumers,” he said.

This research won gold medals in CITREx 2020 and ITEX 2020.

**By: Hafizatulazlin Abdul Aziz and Nur Hartini Mohd Hatta, UMP Press**

**Translation by: Dr. Rozaimi Abu Samah, Engineering College/Faculty of Chemical and Process Engineering Technology**

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