

2022

# ANNUAL REPORT



**CENTRE FOR TESTING,  
MEASUREMENT AND APPRAISAL  
(CeTMA)**

Annual Report 2022: UNIVERSITI UTARA MALAYSIA

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RESEARCH AND INNOVATION MANAGEMENT CENTRE  
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06010 UUM SINTOK  
KEDAH DARUL AMAN  
MALAYSIA

FOR

CENTRE FOR TESTING, MEASUREMENT AND APPRAISAL  
UNIVERSITI UTARA MALAYSIA  
06010 UUM SINTOK  
KEDAH DARUL AMAN  
MALAYSIA

FIRST PUBLISHED, 2023

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# TABLE OF CONTENTS

A Message from Director	1
Achievements	2
Who We Are	5
Research Fellows	7
Our Journey and Major Milestone	8
<hr/>	
<b>Part A: Centre of Excellence</b>	<b>9</b>
Business Solutions Highlights	11
Research & Publication	16
Education & Capacity Building	29
Innovation	36
Our Fellows' Current Project & Hope	39
<hr/>	
<b>Part B: Sustainability Office</b>	<b>45</b>
Sustainability Highlights	47
Sustainability Initiatives	50
SDGs in Action 2022	58
<hr/>	
<b>Part C: General</b>	<b>65</b>
Workplace Environment	67
Advancing our Community	73



# What's inside?

1

**A Message  
from Director**

2

**Achievements**

3

**Who We  
Are**

4

**Research  
Fellows**

5

**Our Journey  
and Major  
Milestone**

6

**Business  
Solutions  
Highlights**

7

**Research &  
Publication**

8

**Education &  
Capacity  
Building**

9

**Innovation**

10

**Our Fellows'  
Current Project  
& Hopes**

11

**Sustainability  
Highlights**

12

**Sustainability  
Initiatives**

13

**SDGs in  
Action 2022**

14

**Workplace  
Environment**

15

**Advancing  
our  
Community**



## A MESSAGE FROM DIRECTOR



**Assoc. Prof. Dr. Masnita Misiran  
Director**

What a year 2022 has been. This year shows a transition period from the volatile pandemic years, moving into the post-Covid era, in which fully normal business operations are expected on campus. Although challenges are high, so is the opportunity.

At CeTMA, we realize the opportunity of this special phase of transition, thus we are actively positioning ourselves amid the digital age, transforming the way we do business from standard routine, into potentially better efficiency and effectiveness in our smart deliverables. This is achieved by utilizing ready technology, good info structure on campus, and economical open-source software. These initiatives can best be seen by the achievements showcased in this report.

We also believe that success in progressing knowledge and innovation should be aligned with sustaining the people. As such, we are actively engaged with key SDG players, i.e. the Sustainable Development Solutions Network Malaysia under the United Nation, and participating in selected UN Sustainable Development Goals (SDG) initiatives, aiming in aligning our experts and services into global SDGs.

We are also proud and humbly appreciate the recognition by the University in awarding CeTMA as the Best University Centre of Excellence in the Majlis Anugerah Jaya University (MAJU UUM) 2022. This acknowledgment will propel us toward continuous growth moving forward.

We end the year 2022 by establishing strong footings, and we hope for a more productive year in 2023!



# ACHIEVEMENTS

## CORE ACTIVITIES



### Sustainable Analytic Solutions



### Community Projects

- UUM@Community Financial Literacy
- UUM@Community STEM Sustainability Program
- Go Green 1 Pokok 1 Pelajar
- Speak Up For Nature Series
- Dashboard Development using Google Data Studio



### University Solutions Provider

- Staff satisfaction survey
- Student satisfaction survey
- Stakeholders satisfaction survey
- Maintenance rating – info & infrastructure



### University Secretariat

- Strategic Plan Thrust 3: Sustainable Community and Industrial Engagement
- Taskforce Times Higher Education Impact Ranking
- Graduate Development Research Grant (GRAD) Grant Secretariat
- Development & Ecosystem Research Grant (DeCOR) Grant Secretariat
- Living Campus Secretariat



### Training

- 5 Training Programs
- 4 Sustainability Workshops



### Research/Consultation

- 11 number of researches
- 5 number of Principal investigators
- 3 number of consultations



# ACHIEVEMENTS

## OUTPUT ACTIVITIES



### Research

- Total amount of research grants – RM 279,690.00
- Research (joint contribution) – RM40,000



### Income Generation

- Consultation: RM8,400.00
- Training: RM4,500.00
- Gift/In-kind: RM5,000.00



### Professional Publication

- 24 articles in journals
- 12 articles in proceeding



### Collaboration / Network

- Malaysian Nature Society
- MYSUN Network
- UN Sustainable Development Solutions Network
- Eidaman Sdn. Bhd.



### General Publication

- 1 UUM Sustainability Report 2021
- 1 UUM Sustainability Bulletin 2022
- 1 Abstract Book – GRaD & DeCOR
- 1 Website Living Campus
- 2 Cetma Bulletins 2022
- 4 Manuals for Dashboard Development
- 1 Handbook on Survey Instrument Development and Composite Index Construction
- 1 CeTMA Yearly Report 2022



### Registered Copyright

- 5 Intellectual Property



### Sustaining Community

- 120 knowledge transfer to school students
- 167 knowledge transfer to publics
- 500 Karas tree, 250 UUM students
- 4 webinar series on sustainable living
- 18 knowledge transfer to professionals from SEAMEO RECSAM
- 10 program Sustainability Training



### Award

- Best University Centre of Excellence 2022

**CONGRATULATIONS**

**BEST UNIVERSITY CENTRE OF EXCELLENT (U-COE)  
AWARD**







## WHO WE ARE

Centre for Testing, Measurement and Appraisal (CeTMA) has been a Universiti Utara Malaysia centre of excellence since 2008. The center's creation shows the university's passion for raising understanding of behavioural consequences in business, economics, and education. For this, the centre provides strong knowledge, know-how, and competence in statistics, economics, psychometric testing, evaluations, and personality profiling. As an instrument development facility, CeTMA promotes legitimate and trustworthy research and statistics.

Moreover, CeTMA provides professional services in building instruments, conducting surveys, evaluating quantitative data, and using psychometric tests for various reasons, including recruiting data validation to improve selection judgments. We conduct economic valuation research and consulting.

### VISION

**Advance the Science and Practice of Testing, Measurement and Appraisal In Business Management.**

### MISSION

**To establish the Universiti Utara Malaysia as an ASEAN centre of excellence in all forms of testing, measurement and appraisal for solutions in business and management.**

### OBJECTIVE

1. Developing sustainable models for business, management, financial and relatable area in support of harmonious living.
2. Aligning available resources in campus and its vicinity towards achieving sustainable models for relatable area of harmonious living.
3. Developing instruments to support continual assessment practices to ensure sustainability for the said models.
4. Disseminating findings to the masses through understandable business intelligence.



## WHO WE ARE

### RESEARCH FELLOWS

- Prof. Dr. Mohd. Azizuddin bin Mohd Sani
- Associate Prof. Dr. Nor Idayu binti Mahat
- Associate Prof. Ts. Dr. Mohd Faizal bin Omar
- Associate Prof. Dr. Masnita binti Misiran
- Associate Prof. Dr. Ani Munirah binti Mohamad
- Dr. Saadi bin Ahmad Kamaruddin

### ASSOCIATE FELLOWS

- Dr. S. Kanageswari a/p Suppiah Shanmugam
- Prof. Madya Dr. Mohd Faizal bin Mohd Isa
- Ts. Dr. Izwan Nizal bin Mohd Shahraneer
- Dr. Idayawati binti Hussein@Hussen
- Dr. Nurakmal binti Ahmad Mustaffa

### ADMINISTRATIVE STAFF

- Rohani binti Abdullah
- Siti Hani Fatimah binti Abu Bakar
- Kaanchana a/p Ramachandiran
- Siti Fartimah binti Saidan
- Amirul Haziq bin Abd Kadir (November-December)


### INTERNSHIP (ANALYTICS TRAINEE)

- Nur Syafiqah Izzani binti Mohamad Farihan (September 2022-Februari 2023)
- Nurul Izzah Fakhira binti Kamaruddin (September 2022-Februari 2023)
- Muhammad Razi Ridzuan bin Marzele (7 March-7 July 2022)



## RESEARCH FELLOWS

Prof. Dr. Mohd. Azizuddin bin Mohd Sani


 <https://www.scopus.com/authid/detail.uri?authorId=35889266000>



Expertise:

- Freedom Of Speech (Political Expression)
- Media Politics
- Human Rights

Associate Prof. Dr. Nor Idayu binti Mahat


 <https://www.scopus.com/authid/detail.uri?authorId=18434434800>



Expertise:

- Multivariate Analysis
- Big Data Analytics
- Classification Problem

Associate Prof. Ts. Dr. Mohd Faizal Bin Omar


 <https://www.scopus.com/authid/detail.uri?authorId=7102131206>



Expertise:

- Artificial Intelligence
- Decision Support System
- Analytics

Associate Prof. Dr. Masnita binti Misiran


 <https://www.scopus.com/authid/detail.uri?authorId=36682863400>



Expertise:

- Financial Mathematics
- Approximation Theory
- Quantitative Risk Analysis

Associate Prof. Dr. Ani Munirah binti Mohamad


 <https://www.scopus.com/authid/detail.uri?authorId=57189290175>



Expertise:

- Cyber Law
- Media Law
- Ict Law

Dr. Saadi bin Ahmad Kamaruddin

 <https://www.scopus.com/authid/detail.uri?authorId=49361369000>



Expertise:

- Applied Statistics
- Metaheuristic Algorithms
- Data Analytics



## OUR JOURNEY AND MILESTONES

**2008**

- Establishing CeTMA as strategic business unit.

**2012**

- Project Commonwealth Fund

**2014**

- KPT-PTPTN
- CPD-AKEPT

**2018**

- Secretariat for 2 university grants
- Comprehensive staff satisfaction online survey
- Comprehensive student satisfaction online survey

**2016**

- Initial instrument development for staff satisfaction survey
- CTEF Commonwealth grant
- Transform from strategic business unit into University Centre of Excellence

**2020**

- Living Campus Secretariat for Sustainable Campus
- SDSN engagement
- Transforming organization into digital analytics hub
- Comprehensive stakeholders (staff, students, stakeholder) online survey dashboard analytics

**2022**

- Strengthening digital analytics
- Digital experts for Kedah Digital 2035, BPEN Kedah
- THE Impact Ranking participation
- Establishing 4 taskforces for LC initiatives
- Establishing digital contents for visibility presence
- Established as Department (PTJ) for Centre of Excellence and Sustainability Office



# Part A: Centre of Excellence



# BUSINESS SOLUTIONS HIGHLIGHTS





# UUM GREEN DASHBOARD SOLUTIONS

UUM Green Dashboard Solutions emerged during the pandemic year 2020, in collaboration with many departments at Universiti Utara Malaysia.

By utilizing the improvement of infostructure that is aggressively developed on campus in response to the lockdown period, the Centre for Testing, Measurement & Appraisal (CeTMA) is taking initiatives to transform solutions on campus that is previously based on paper and standard reporting into dashboard solutions that is greener, leaner, up-to-date, and dynamic.

We have successfully disseminated the otherwise lengthy findings through understandable business intelligence to University management and departments at UUM. At current, at the University, we have developed comprehensive dashboard solutions for a customer satisfaction survey, i.e. staff, students, and other stakeholders; alumni rating, infra, and infostructure maintenance reports, ranking reports, and University social responsibility program impact reporting. By transforming the findings into an analytics dashboard, the rich data can be visualized with ease and more relatable, and the dedicated department can see only what interests them.

Realizing the huge opportunity to utilize good info structure on campus and available open source that is free and cheap in this digital era, we transfer the skill to develop dashboard analytics to staff and students on campus, as well as students that undergo internships at CeTMA. These interns have successfully conducted programs to teach the public and produced a step-by-step guide manual on how to construct the dashboards. While, We have also successfully trained undergraduate students in the SQQM3024 Mathematical Modeling class, in which they can teach school students on to construct their budgeting dashboard on their own. This program is organized in collaboration with the District Education Office Kulim, Kedah, Schools in Kulim, MYSTEM Ambassador, and MYSUN Network. These initiatives are aligned with the UN SDG4: Quality Education, SDG 9: Industry, Innovation, and Infrastructure, SDG 10: Reduced Inequalities, and SDG 17: Partnerships for the Goals.

Another spin-off from this project is the successful development of the Abidin Mosque community dashboard funded by the Lembaga Zakat Negeri Kedah, in the hope for the community to get to know their people's well-being faster, as well as understand their current sentiments. The dashboard can detect quicker the households from low-income and underprivileged groups for dissemination of help, which is aligned with SDG 1: No Poverty, SDG 2: Zero Hunger, and SDG 11: Sustainable Cities and Communities.

These initiatives aim to ensure that the University can become an active agent to empower all talents, either in or outside campus, towards a more sustainable living, in line with the University's agenda towards a sustainable campus in 2030, and the United Nation's Sustainable Development Goals 2030.



# SELECTED DASHBOARDS

### UUM STAFF SATISFACTION & HAPPINESS

YEAR

TOTAL RESPONDENTS: 3,120

#### DEMOGRAPHIC

Male: 1,305  
Female: 1,815

More than 31 years old: 1,815  
21 - 30 years old: 1,305

### Student Satisfaction Report

Total number of students responded (to date updated by Dec 2021): 4,466

#### OVERALL SATISFACTION INDEX

0.75  
4.73

92.92

Academic Services: 4.80 (98.16%)  
Support Academic Services: 4.69 (95.49%)

### UUM STAKEHOLDERS SURVEY YEAR 2021

Overview on Stakeholders Survey for Practicum Students A201 and A302

Response: 2,259

#### Overall Satisfaction with UUM

99.2% (Satisfied), 0.8% (Not Satisfied)

#### Willingness to Recruit UUM Students

21.6% (Yes), 78.4% (No)

Category	Score
English Proficiency	6.9
Market Readiness	7.0
Market Relevance	7.2
Academic Preparation	7.2

### UUM DASHBOARD MASJID ABIDIN

Dashboard ini memaparkan maklumat tentang anakariah Masjid Abidin, Changlun.

Jumlah Anakariah: 710  
Jumlah Pustakawan: 3,231

Rendaman Buku Pustakawan: 3,413.85

Category	Value
English Proficiency	6.9
Market Readiness	7.0
Market Relevance	7.2
Academic Preparation	7.2

### ADDIN DASHBOARD

Jumlah Responden: 3,016

#### MAKLUMAT RESPONDEN

Item	No. Matric	No. Telefon
1		
2		
3		
4		

#### INASIS

3.2% (SME BANK), 18.4% (MUAMALAT), 19.4% (BANK BANYAK), 10.4% (MMS), 10.4% (TAS), 10.4% (PRISTON), 10.4% (TRADEWINDS), 10.4% (SME DARBY), 10.4% (TMS), 10.4% (TIL), 10.4% (GRANT), 10.4% (PETRONAS), 10.4% (BMS), 10.4% (MISC)

#### JANTINA

38.7% (Perempuan), 61.3% (Lelaki)

### DASHBOARD PELAPORAN PRA/PASCA PROGRAM USR

Tajuk Program: [Dropdown]  
Tajuk: [Dropdown]

Jumlah peserta: 11  
Jumlah Program: 5

#### MAKLUMAT PESERTA

JANTINA: 66.7% (Perempuan), 33.3% (Lelaki)

KAWASAN TEMPAT TINGGAL: 66.7% (Urban), 33.3% (Rural)

#### NEGERI ASAL

### PENILAIAN PENYENGGARAAN INFRASTRUKTUR - JPP

Jabatan Pembangunan dan Penyelenggaraan Universiti Utara Malaysia

Anggaran: 327

Category	Value
KOMPETENSI	3.541
KEPERLUAN UUM	3.755
KEPUSAKAN	3.398
ACSA	3.755
PENGALAMAN	3.607

### PENILAIAN PENYENGGARAAN INFRASTRUKTUR - UUMIT

UUMIT Universiti Utara Malaysia

Anggaran: 241

Category	Value
Layanan	3.979
Kompetensi	3.726
Keperluan	3.822
Pengaruh dan Bidang	3.979
Pengalaman	3.822





## BUSINESS SOLUTIONS

Staff Satisfaction and Happiness Dashboard

Student Satisfaction Report Dashboard

Infrastructure Maintenance Rating - JPP Dashboard

Infrastructure Maintenance Rating - UUMIT Dashboard

Stakeholders Survey Dashboard

Masjid Abidin Dashboard

Times Higher Education (THE) Impact Ranking Dashboard

Webinar Impact Program Dashboard

ADDIN Dashboard

USR Pre-post Report Dashboard

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## BUSINESS SOLUTIONS

- Staff Satisfaction and Happiness Survey
- Student Satisfaction Report Survey
- Infrastructure Maintenance Rating - JPP Survey
- Infrastructure Maintenance Rating - UUMIT Survey
- Stakeholders Survey
- Masjid Abidin Survey
- Times Higher Education (THE) Impact Ranking Survey
- Webinar Impact Program Survey
- USR Pre-post Report Survey

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# RESEARCH & PUBLICATION





**10 Research Grants**

**Collaboration Between  
UUM and Three Public  
Universities**

**Coaching by Prof.  
Emeritus Dr. Keith A.  
Houghton: How we Value  
Higher Institution  
Business?**

**46 Journals and  
Proceedings**



**3 General Publication**

## LIST OF CURRENT RESEARCH

NO	FELLOW	RESEARCH TITLE
1.	Associate Prof. Dr. Masnita bt Misiran @ Bakun	Pembangunan Program Analitik Bertanggungjawab Sosial dan Kominiti - Jangkaan Impak Menerusi SROI
2.	Associate Prof. Dr. Masnita bt Misiran @ Bakun	Constructing Problem-Based STEM Activity to Foster Interest in STEM Education Among Pupils From Rural Area: A Spin Off MySystem Ambassador Program
3.	Prof. Dr. Mohd Azizuddin Mohd Sani	Sentimen Masyarakat terhadap UMNO di Kedah
4.	Prof. Dr. Mohd Azizuddin Mohd Sani	Landskap Politik Kedah: Pola Menjelang Pilihan Raya Umum KE 15 (PRU15)
5.	Associate Prof. Ts. Dr. Mohd Faizal Bin Omar	A New Model For Cluster-Based Whale Optimization Algorithm With Multiple Restart Strategy For Solving Appliances Scheduling Problem
6.	Associate Prof. Dr. Ani Munirah Mohamad	Cloud Computing Governance Model For Higher Education
7.	Associate Prof. Dr. Ani Munirah Mohamad	Assessing Happiness Level In Relation To Productivity Among UTHM/UUM/UPM/UMK/UMP Employees During Pandemic

# LIST OF CURRENT RESEARCH

NO	FELLOW	RESEARCH TITLE
8.	Dr. Saadi bin Ahmad Kamaruddin	Evaluating Students' Engagement Towards Blended Learning of Distance Learning Programme: A Case Study in Elementary Statistics Subject
9.	Dr. Saadi bin Ahmad Kamaruddin	Controlling Food Waste Using Smart Portable Outdoor Domestic Solar Drying Cabinet (PODSOD) With Smartphone Application: Utilization of Available ICT Infrastructure In Campus
10.	Dr. Saadi bin Ahmad Kamaruddin	A Hybrid Date Palm Seed Growth Algorithm Least Median Square And Backpropagation Neural Network For Stock Market Prediction



The Collaborative Research Grants are implemented properly to ensure that research grants match. A Memorandum of Agreement (MoA) has been signed by four public universities which involve Universiti Utara Malaysia (UUM), Universiti Tun Hussein Onn Malaysia (UTHM), Universiti Malaysia Kelantan (UMK), and Universiti Malaysia Pahang (UMP), which was done online this morning. The Vice-Chancellor, Prof. Dr. Haim Hilman Abdullah, said this MOA was the brainchild of the UTHM management and coordinators, who mobilized a matching grant initiative through the Collaborative Research Grant (CRG) between all the universities involved.

He said this MOA includes academic collaboration, research, and consultation, which significantly impact these four universities due to COVID-19.

"Research on health issues such as depression, anxiety, excitement, sadness, and stress expressed in the context of teaching and learning, as well as other tasks at this university, will be done," he said.

In this context, the Minister of Higher Education, Datuk Seri Noraini Ahmad, said she had held a series of meetings with university students and lecturers to get feedback on the impact of COVID-19 and suggested that action be taken to deal with any issues and problems that arise following the pandemic.

Prof. Dr. Haim Hilman added that in response to the recommendation of the Minister of Higher Education (MOHE), UUM welcomed the implementation of the CRG matching grant together with UTHM, UMK, and UMP, which involved a contribution of funds amounting to RM40,000, i.e., a contribution of RM10,000 by each university partner.

For this purpose, a total of six UUM researchers, led by the Research Fellow at the Centre for Testing, Measurement, and Appraisal (CeTMA), Assoc. Prof. Dr. Ani Munirah Mohamad, together with 17 researchers from UTHM, UMK, and UMP, will conduct research in the context of their respective universities.

Although Malaysia is currently in an endemic phase, the study of "Assessing Happiness Level in Relation to Productivity Among University Employees During Pandemic" is seen as very

## RESEARCH COLLABORATION BETWEEN UUM AND THREE PUBLIC UNIVERSITIES

important and necessary, not only because of the COVID-19 pandemic, which has caused global social and economic disruption but also because the staff at higher education institutions are feeling the effects of this pandemic from various aspects of their work.

Therefore, UUM welcomes the efforts of collaborators from UTHM, UMK, and UMP to carry out this study to assess the level of happiness of working staff at their respective universities, especially in the pandemic era.



24th-25th July 2022 - Research is the key point to increase the ranking of the university. It is crucial to ensure that in order to increase institution's profile, researchers in Universiti Utara Malaysia (UUM) focuses on high quality research.

Another one way that UUM could do to increase high quality publication in UUM is to hire more international academicians. Small number of papers are acceptable but with good quality. Contract above contract is possible.

For QS Universities Ranking, UUM's name must appear in these high quality publications. On yearly basis, UUM must have at least six to eight high quality papers, at least in Scopus database. Another possible initiative that could be practiced is to increase citations among researchers in UUM through good review paper publications. Incentive for publications is a very good approach to encourage researchers in UUM in a long run.

“SMALLER IN QUANTITY, BUT BETTER IN QUALITY”

UUM could create industrial PhD programmes for seniors in industries, where they are usually seniors in industries, aged of more 50 years old, who are very influential, and have great access to industrial data and grants. For each program, 10 sessions per year would be adequate.

There should be 8 positions in the advisory board for this industrial PhD programmes who could be the Managing Partners, the Technical Partners as well as the existing employers of the alumni. This effort could also create trusting relationships with UUM in a long term. These Advisory Board members would be a very great support to the university.

All in all, in the first stage, UUM could focus on these three elements: (i) Education, (ii) Research and (iii) Engagement. UUM can focus on the customer experience. A good start would be to encourage consultation activities and involve stakeholders in researcher activities in UUM. Students need to be respected and managed based on different backgrounds, a platform need to be developed. Students need to be arranged at all times.

“Value propositions of UUM should be (i) focusing on strength of UUM, (ii) focusing on strength of Sintok, and (iii) focusing on Customers' Experience”.

## RESEARCH COACHING BY PROF. EMERITUS DR. KEITH A. HOUGHTON: HOW WE VALUE HIGHER INSTITUTION BUSINESS?





## JOURNALS AND PROCEEDINGS

NAME	LIST OF PUBLICATIONS
Prof. Dr. Mohd. Azizuddin bin Mohd Sani	Babayo Sule, Bakri Bin Mat, Mohd. Azizuddin bin Mohd Sani, (2022). Issues and regulations in party financing and electoral expenses in Nigeria (1999–2020). <i>Journal of Contemporary African Studies</i> , 40(2), 253 - 269.
Associate Prof. Dr. Nor Idayu binti Mahat	Shahrul Azmi bin Mohd. Yusof, Nor Idayu binti Mahat, Jauriyah binti Shamsuddin, Roshidi bin Din, Ayoib Bin Che Ahmad, (2022). The Role of Community Managers in Digitizing Small Businesses. <i>Proceeding of International Conference on Decision Aid Sciences and Applications (DASA)</i> , (), 863 - 868.
	Shahrul Azmi bin Mohd. Yusof, Roshidi bin Din, Nor Idayu binti Mahat, Jauriyah binti Shamsuddin, Ayoib Bin Che Ahmad, (2022). Asnaf i-Care: Aplikasi Pengurusan Jual Beli Produk Asnaf Asnaf i-Care: Asnaf Product Sales Management Application. <i>International Journal of Zakat and Islamic Philantrophy</i> , 4(1), 12 - 22.
Associate Prof. Ts. Dr. Mohd Faizal Bin Omar	Mohd Nasrun Bin Mohd Nawî, Noorhadila Binti Mohd Bakeri , Mohd Faizal Bin Omar, Mohamad Zamhari Tahir, Mohd Suhaimi Mohd-Danuri, Angela Lee, (2022). A Multistage Methodology Approach for Constraints Prioritisation of Facility Layout Problem (FLP) in Enhancing the Performance of Building Energy Efficiency. <i>Journal of Advanced Research in Applied Sciences and Engineering Technology</i> , 28(2), 199 - 210.
	Nurul Husna Mahadzir, Mohd Faizal Bin Omar, Mohd Nasrun Bin Mohd Nawî, Anas A. Salameh, Kasmaruddin Che Hussin, Abid Sohail, (2022). MELex: The Construction of Malay-English Sentiment Lexicon, 71(1), 1789 - 1805.
Associate Prof. Dr. Masnita binti Misiran	Masnita binti Misiran, Zahayu binti Md Yusof, Hasimah binti Sapiri, Ilyani Abdullah, (2022). Students Satisfaction Towards Cafeteria in University Campus – A Case Study. <i>Journal of Statistical Modelling and Analytics</i> , 4(2), 14 - 27.
	Nurul Faziera Binti Khairul Adlee, Masnita binti Misiran, Zahayu binti Md Yusof, Hasimah binti Sapiri, Norani Binti Amit, (2022). Perception on Malaysia fundmyhome crowdfunding initiative for affordable housing . <i>AIP Conference Proceedings</i> , (), 1 - 6.

## JOURNALS AND PROCEEDINGS

NAME	LIST OF PUBLICATIONS
Associate Prof. Dr. Masnita binti Misiran	Masnita binti Misiran, Zahayu binti Md Yusof, Siti Suzlin Supadi, (2022). Impact of Financial Literacy Level on Financial Behavior among Higher Education Students: A Case Study in KDA University. EDUCATUM Journal of Social Sciences, 8(-), 43 - 52.
	Masnita binti Misiran, Zahayu binti Md Yusof, Siti Suzlin Supadi, (2022). Determining the Correlation Between Behaviour, Debt and Money Management Among Young Adults. Journal of Computational Innovation and Analytics, 1(2), 111 - 127.
	Masnita binti Misiran, Nazihah Binti Ahmad, Zahayu binti Md Yusof, Ummi Rohaizad Abdul Rahim, (2022). Utilizing Experiential Learning to Improve Financial Literacy among Young Adults through STEM Service-Learning Activity during Movement Control Order. International STEM Journal, 3(1), 1 - 16.
	Nurul Faziera Binti Khairul Adlee, Masnita binti Misiran, Zahayu binti Md Yusof, Hasimah binti Sapiri, Norani Binti Amit , (2022). Sustainable housing for Malaysian: A crowdfunding initiative through SEM perspective. AIP Conference Proceedings 2464,030005 (2022), (), 030005-1 - 030005-12.
	Masnita binti Misiran, Nazihah Binti Ahmad, Zahayu binti Md Yusof, Maslina Misiran, (2022). Constructing STEM 3R Activity through Service-Learning Program during Movement Restriction. Asian Journal Of Assessment In Teaching And Learning, 12(1), 63 - 75.
	Masnita binti Misiran, Zahayu binti Md Yusof, (2022). Determinants of Debt Management Among Fresh Graduates. Journal of Quality Measurement and Analysis , 18(2), 65 - 73.
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	Lok Lee Wen , Masnita Misiran, Hasimah Sapiri , Siti Suzlin Supadi, Zahayu Md Yusof,(2022).Quantitative Assessment of Unemployment among Youths in Malaysia

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NAME	LIST OF PUBLICATIONS
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	Ahmad Shamsul bin Abd. Aziz, Nor Azlina Binti Mohd Noor, Ani Munirah binti Mohamad, Yusramizza Binti Md Isa @ Yusuff, Huda Bt Haji Ibrahim, Osman B Ghazali, Ahmad Nabhan Harraz bin Zulkifli, (2022). <i>Buli Siber: Analisis Undang-undang di Malaysia . International Journal of Law, Government and Communication</i> , 7(29), 276 - 284.
	Azharudin bin Ali, Wan Norhayati Binti Wan Ahmad, Ani Munirah binti Mohamad, Adyzakrie Mohamad Zaki, Nunung Nurul Hidayah, (2022). Issues, Challenges and Strategies in Obtaining Reliable and Quality Livelihood and Wealth Data Across B40 Community in Malaysia. <i>International Journal of Academic Research in Business and Social Sciences</i> , 12(8), 899 - 912.
	Ani Munirah binti Mohamad, Yusramizza Binti Md Isa @ Yusuff, Ahmad Shamsul bin Abd. Aziz, Nor Azlina Binti Mohd Noor, Huda Bt Haji Ibrahim, Osman B Ghazali, Saslina Kamaruddin, Wan Rosalili Wan Rosli, (2022). Socio-Legal Enquiry into the Motivating Factors of Cyberbullying in Malaysia. <i>BiLD Law Journal</i> , 7(1), 74 - 84.
	Ani Munirah binti Mohamad, Shazida Jan Bt. Mohd Khan, Izwan Nizal Bin Mohd Shahrane, Zakiah Binti Zain, S. Kanageswari a/p Suppiah Shanmugam, (2022). Papan Pemuka (Dashboard) Sebagai Alternatif Visualisasi Integriti Staf. <i>International Journal of Law, Government and Communication</i> , 7(29), 285 - 295.
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## JOURNALS AND PROCEEDINGS

NAME	LIST OF PUBLICATIONS
Associate Prof. Dr. Ani Munirah binti Mohamad	Ani Munirah binti Mohamad, Felicia Yong Yan Yan, Nurhazman Abdul Aziz, Shuhairy Norhisham, (2022). Inductive-Deductive Reasoning in Qualitative Analysis using ATLAS.ti: Trending Cybersecurity Twitter Data Analytics. 2022 3rd International Conference for Emerging Technology, (), 1-5.
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	M.F.A. Bakar, Shuhairy Norhisham, N H Z Ibrahim A Abudeyab, N.M. Saad, N.N.I.M. Azlan, N.S.M. Shkuri , Ani Munirah binti Mohamad, (2022). Evaluating the Quality of Service of Bus Performance in Johor Bahru. IOP Conference Series: Earth and Environmental Science - GEOTROPIKA 2021 and ICHITRA 2021, 971(1), 1 - 12.
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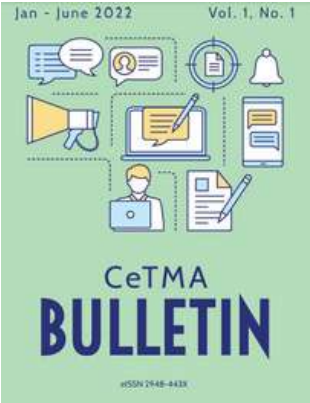


## JOURNALS AND PROCEEDINGS

NAME	LIST OF PUBLICATIONS
Associate Prof. Dr. Ani Munirah binti Mohamad	Ani Munirah binti Mohamad,(2022).Performance Comparison on Water Demand Methods Applied at Pengkalan Gawi, Kenyir Lake, Malaysia
	Harlida Bt Abdul Wahab, Ani Munirah binti Mohamad, (2022). Problem-Based Learning vs Problem Solving: Case of Law Students. 6th Inspirational Scholar Symposium 2021, (), 380 - 388.
	Ani Munirah binti Mohamad, Anis Shuhaiza Binti Md Salleh, Mohd Zakhiri bin Md. Nor, Yusramizza Binti Md Isa @ Yusuff,(2022). Impacts of augmented reality in legal studies: Students' reflections., x,151-155.
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## JOURNALS AND PROCEEDINGS

NAME	LIST OF PUBLICATIONS
Dr. Saadi bin Ahmad Kamaruddin	Saadi bin Ahmad Kamaruddin, Emy Ezura Bt. A. Jalil, Nor Anis Nadhirah Md Nasir, Irnis Azura Zakarya, Norlinda Mohd Rozar, (2022). Hygienic and Timeliness of Salted Dried Fish Process Using Smart Portable Outdoor Domestic Solar Drying Cabinet (PODSOD). Food Science and Technology, 10(2), 34 - 53.
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	S.B. Adamu, M.K. Halimah, Saadi bin Ahmad Kamaruddin, (2022). Structural, Prediction and Simulation of Elastic Properties for Tellurite Based Glass Systems Doped with Nano and Micro Eu2O3 particles via Artificial Neural Network Model. Journal of Materials Research and Technology, 17(March–April 2022), 586 - 600.
	Shafaf Ibrahim, Saadi bin Ahmad Kamaruddin, Nor Anis Nadhirah Md Nasir, (2022). Heating Load of Residential Buildings Using Multiple Linear Regression Artificial Neural Network. Journal of Advanced Research in Fluid Mechanics and Thermal Sciences, 92(1), 28 - 38.
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	Nur Anis Nadhirah Md Nasir, Saadi bin Ahmad Kamaruddin, (2022). Sustainable alternative animal feeds: Recent advances and future perspective of using azolla as animal feed in livestock, poultry and fish nutrition. Sustainable Chemistry and Pharmacy, 25(April 2022), 1 - 15.
	Saadi bin Ahmad Kamaruddin, (2022). Evaluating heart failure predictors using quantitative approaches. AIP Conference Proceedings, 2472(1), 050008-1 - 050008-7.

## GENERAL PUBLICATION

TITLE	SUMMARY	PICTURE
CeTMA Bulletin 1	<p>This relatively new publication was published in June 2022. This summary presents an overview and initiatives of CeTMA during the half-year from January 2022 until June 2022 and also contains information about CeTMA itself, its supporters and collaborators, staff, and work. In addition, we include some small news about the events that happened in the past half year and an article explaining the strategy plan for UUM 2030's sustainability, called Living Campus</p>	
CeTMA Bulletin 2	<p>This CeTMA bulletin contains news that has been highlighted based on CeTMA's actions during the year 2022. The goal of publishing this bulletin is to share with all readers the background information, publications, research, and initiatives that have been implemented by CeTMA. Also included is a list of grants that have been funded by the university and entrusted to CeTMA, such as the Ecosystem Development and Research Grant (DEcoR) and the Graduate Development Research Grant (GraD)</p>	
CeTMA Annual Report 2022	<p>This report showcases achievements, products, and activities throughout the year 2022. CeTMA ends the year on a sweet note by achieving the Best University Centre of Excellence status in 2022.</p>	

# EDUCATION & CAPACITY BUILDING







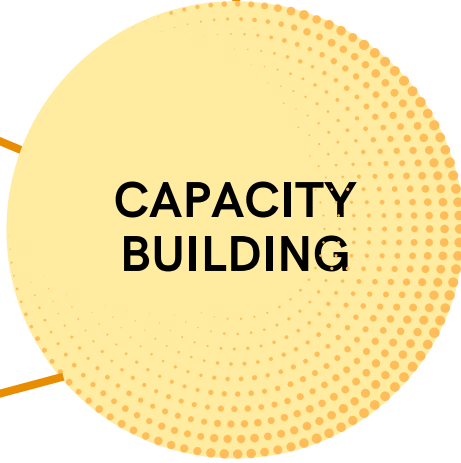
**Qualitative Research and Data Analysis Workshop**

**Data Analytics Dashboard Training**

**Publication with Bibliometric Analysis Workshop**

**Manual Dashboard Infrastructure Maintenance Rating**

**USR Program Pre-Post Reporting Dashboard Development Manual**



**Manual Financial Literacy**

**Manual Dashboard Impact Program**

UUM Online: On 23 November 2022, the Centre for Testing, Measurement, and Appraisal (CeTMA) organized a webinar entitled "Qualitative Research and Data Analysis" through the Facebook Live platform. The partnership, which was streamed virtually through fellow organizers of the Doctorate Support Group (DSG), was attended live by approximately 150 participants, and people can watch the footage at any time on DSG's Facebook page.

The first panelist, Dr. Wan Norhayati Wan Ahmad, senior lecturer at the Tunku Putri Intan Safinaz School of Accounting (TISSA-UUM), shared the potential use of focus group canvas (Focus Group Discussion-FGD Canvas) for the purpose of qualitative data collection. Several examples of FGD Canvas have been shared to illustrate the effective data collection process of focused groups.

The second panelist, Dr. Azharudin Ali, a senior lecturer at TISSA-UUM and a fellow at the Institute for Strategic and Sustainable Accounting Development (ISSAD), shared his experience in conducting research on the B40 community, focusing on the challenges faced in data collection as well as the strategies implemented to overcome these challenges.

Meanwhile, a third panelist, Dr. Nor Intan Saniah Sulaiman, senior lecturer at the School of Quantitative Sciences (SQS) and a fellow of the Institute for Psychotherapy, Correctional, and Rehabilitation (IPSYCORE), recounted a qualitative study involving social media from Facebook, Instagram, and several other social media. He also provided various examples of cases and issues others could potentially analyze from social media.

Lastly, Assoc. Prof. Dr. Ani Munirah Mohamad from the School of Law (SOL), a research fellow of CeTMA as the fourth panelist, shared the conceptualization of qualitative analysis from data collection to completion of the analysis process. He also showed data analysis demonstrations using ATLAS.ti software involving qualitative data of various formats such as textual and picture files.

## QUALITATIVE RESEARCH AND DATA ANALYSIS WORKSHOP

23 NOVEMBER 2022

The overall participant who attended the workshop stated that they were satisfied with the panelist's partnership through this webinar. Director of CeTMA, Assoc. Prof. Dr. Masnita Misiran @ Bakun expressed appreciation to all participants who supported the program organized by CeTMA. She said: "CeTMA plans various programs and partnerships that focus on data analytics, including qualitative and quantitative data, in line with the university's aspiration to make UUM a leading research hub."



6th December 2022 – The Centre for Testing, Measurement, and Appraisal (CeTMA), Universiti Utara Malaysia (UUM), provided a virtual training on data analytics dashboard development using Google Data Studio for academicians at SEAMEO RECSAM, Pulau Pinang. Dr. Saadi Ahmad Kamaruddin, CeTMA's Deputy Director, delivered the public lecture. There were 18 professionals from SEAMEO RECSAM attended the 4-hour training session.

CeTMA aims to educate the public on how to communicate big data into dashboards rather than standard reporting that is typically lengthy, into analytics reporting that is fully accessible online, dynamic, and up-to-date; by utilising good data structure on campus as well as available open-source software.

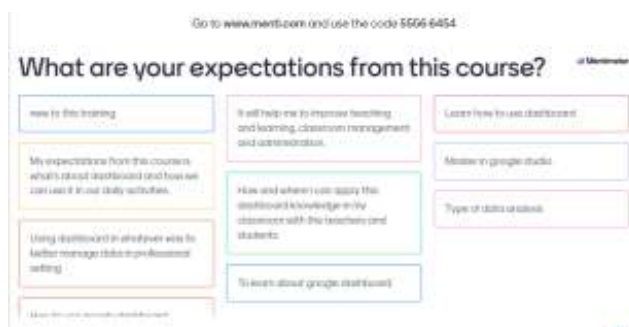
A data analytics dashboard is a tool for organising, visualising, analysing, and tracking data while multitasking. The ultimate purpose of a data analytics dashboard is to make it easier for data analysts, decision makers, and regular users to understand their data, get deeper insights, and make better data-driven decisions.

Data dashboards are designed to connect and extract crucial information from many data sources. Charts, figures, graphs, and tables are utilised to present this information in a unified, coherent manner. From this training, it is expected that SEAMEO RECSAM could produce different analytical dashboards for each department, as well as a dashboard for each specific project, allowing for extensive monitoring of highly desired KPIs.

At the end of the session, three winners were chosen based on the dashboards that had been developed. Overall, these interventions aim to ensure that UUM, in conjunction with its stakeholders, is ready to embrace technology in accordance with the university's goal of creating a sustainable community by 2030.

## DATA ANALYTICS DASHBOARD TRAINING

6 DECEMBER 2022



20 December 2022: The publication of the research paper is very important, especially for the postgraduate students and lecturers. One of the papers that is possible to be published by academicians and students is on bibliometric analysis, a scientific computer-assisted review in which this analysis measures the bibliographic data from a collection of documents.

Understanding that need, the Center for Testing, Measurement, and Appraisal (CeTMA) conducted a workshop on bibliometric analysis on December 20th, virtually. The invited speaker was Miss Tengku Nurul Aimi Balqis Tengku Malim Busu, a Master of Science (Statistics) research student from the School of Quantitative Sciences (SQS). The objective of this workshop is to expose the members of academia on how to analyse the Scopus-searched dataset using VOSviewer and "publish or perish." Furthermore, the speaker also guided the participants on how to perform a trend and impact analysis based on publications in a research area.

There were 41 people at this workshop: 34 students and staff from Universiti Utara Malaysia (UUM), 2 students from Universiti Malaysia Perlis (UNIMAP), 1 student from Universiti Malaya (UM), 1 student from Universiti Kebangsaan Malaysia (UKM), 2 students from Universiti Sains Malaysia (USM), and 1 student from Universiti Teknologi Malaysia (UTM).

The speaker has successfully demonstrated to the participants how to perform a research area and a title search using the Scopus database, how to perform basic bibliometric analysis, how to create a visualisation map with VOSviewer software, how to perform citation metric analysis with Publish or Perish (PoP), how to write a research paper, and lastly, how to interpret bibliometric analysis results. This effort by CeTMA is expected to promote the sustainability of quality education and publication in higher education.

## PUBLICATION WITH BIBLIOMETRIC ANALYSIS WORKSHOP

20 DECEMBER 2022

UUM  
Universiti Utara Malaysia  
December 20, 2022 | 10:00 a.m.  
cetma.uum.edu.my

# Publication with Bibliometric Analysis

TENGGU NURUL AIMI BALQIS  
TENGGU MALIM BUSU  
Student Master of Science  
(Statistics) By Research  
tengku\_nurulaimi@uum.edu.my  
+601128789655

Organized by: Pusat Pengujian Pengukuran dan Pemilihan  
Universiti Utara Malaysia

### LEARNING OBJECTIVES :

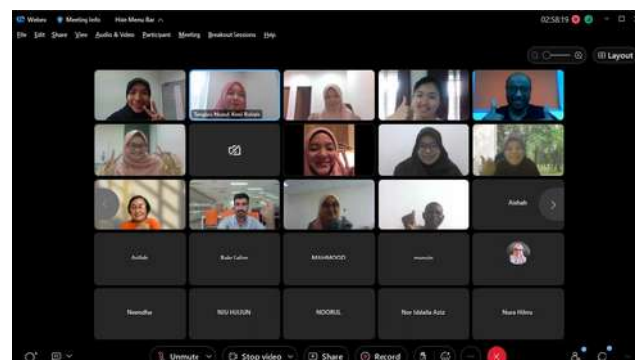
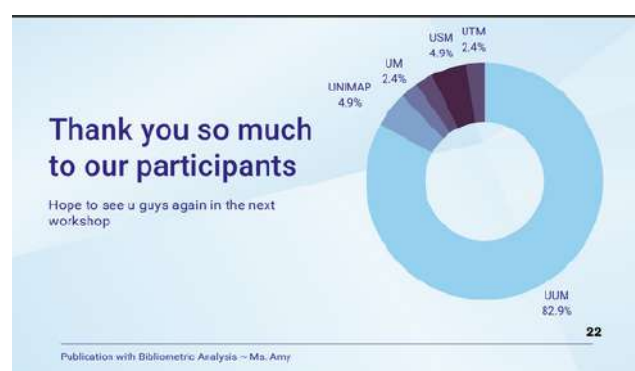
When the participants complete this course, they should be able:

- To run the Scopus Data in Voeviewer & Publish or Perish.
- To do the analysis for the trend & impact of publication in any area of reseach.

### TOPIC COVERED :

- Searching Scopus Data
- Basic Bibliometric Analysis
- Visualization Map
- Citation Metric



PUBLICATION WITH BIBLIOMETRIC ANALYSIS - ME. AMY 1



## PUBLICATIONS - DASHBOARD MANUALS

TITLE	SUMMARY	LINK
<p>Dashboard Development Manual Infrastructure Maintenance Rating (IMR) (Nur Syafiqah Izzani Mohamad Farihan)</p>	<p>This Dashboard Development Manual is published to demonstrate, step by step, how to create an Infrastructure Maintenance Rating dashboard. This manual can help perform data visualization using simple and user-friendly tools.</p>	 <p><a href="https://designrr.page/?id=246543&amp;token=1262670814&amp;type=FP&amp;h=6392">https://designrr.page/?id=246543&amp;token=1262670814&amp;type=FP&amp;h=6392</a></p>
<p>USR Program Pre-Post Reporting Dashboard Development Manual (Nurul Izzah Fakhira Kamaruddin)</p>	<p>This dashboard Manual describes how to build a dashboard University Social Responsibility pre-post program. This dashboard serves as a visualization tool to monitor demographics and view data. Dashboard is reporting tool that turns data into informative and easy-to-read dashboards.</p>	 <p><a href="https://designrr.page/?id=246862&amp;token=3056084221&amp;type=FP&amp;h=7352">https://designrr.page/?id=246862&amp;token=3056084221&amp;type=FP&amp;h=7352</a></p>

## PUBLICATIONS - DASHBOARD MANUALS

TITLE	SUMMARY	LINK
<p>Manual Financial Literacy (Anis Sofea Yahaya)</p>	<p>Easy step by step guide in creating personal financial budgeting with the help of easy access technology such as Google. In here, will be guiding and learning on how to utilise the use of Google Sheet and Google Data Studio combined.</p>	 <p><a href="https://issuu.com/masnitam-isiran/docs/guideline_webinar_on_financial_budgeting_and">https://issuu.com/masnitam-isiran/docs/guideline_webinar_on_financial_budgeting_and</a></p>
<p>Manual Dashboard Impact Program (Nurulhuda Muhamad)</p>	<p>This is a manual procedure on the development of the "Maklum Balas Program" dashboard. This handbook precisely shows the step-by-step process or guidelines on how to develop a dashboard, especially for a beginner. Basically, the dashboard of the "Maklum Balas Program" visualises the demographics of the participants who have joined the webinar conducted by the Center for Testing, Measurement, and Appraisal (CeTMA). Hopefully, this handbook will assist the reader in effectively developing an interactive dashboard</p>	 <p><a href="https://issuu.com/masnitam-isiran/docs/manual_pembangunan_dashboard_maklum_balas_program">https://issuu.com/masnitam-isiran/docs/manual_pembangunan_dashboard_maklum_balas_program</a></p>

# INNOVATION





## Copyrights at CeTMA

NO	TITLE	SUMMARY
1	UUM Impact Program Monitoring Dashboard 1.0 LY2022P03460 <i>Masnita Misiran, Nor Idayu Mahat &amp; Rohani Abdullah</i>	This dashboard serves as a visualization tool for a community outreach program in the university. The primary objective of this dashboard is to provide a standardized platform for an ongoing community outreach program that can be captured through one system for data capturing, data visualization, program feedback, and impact monitoring. This initiative allows respective decision-makers for comprehensive community data collection, understanding the actual needs in the community, aligning the strategic resources in campus to match with current struggles in the community, measuring university impact in the community, and planning for corrective measures that are necessary to improve university's readiness for effective impact measurement towards high impact community outreach program which is aligned with the UN Sustainable Development Goals 2030.
2	Sustainable Community Monitoring Dashboard LY2022P03461 <i>Masnita Misiran, Nor Idayu Mahat &amp; Mohd Nizam Saad</i>	This dashboard serves as a visualization tool for monitoring demography and understanding the community's needs within a limitless period. The primary objective of this dashboard is to provide a standardized platform for data collection in a smaller locality in a community that can be accessed with less effort, is cost-effective, and is dynamic. This initiative allows the respective community leaders to have quick access to the information of the people in their locality, identify people with needs, align people with skills driven through circular economy, and understand sentiments in their locality, moving towards empowerment from the grassroots.
3	Industrial Design Search Report – Solar Powered Compost Bin IDSR000036 <i>Saadi Ahmad Kamaruddin</i>	This product transforms food wastes into compost and generated using solar energy system for sustainable environment.





# INNOVATION

## Copyrights at CeTMA

NO	TITLE	SUMMARY
4	F2-Azolla LY2022E00188 <i>Saadi Ahmad Kamaruddin</i>	This product uses dried azolla as fertiliser and animal feed.
5	Patent Application Smart Compost Bin (SaCoB) PI2022004722 <i>Saadi Ahmad Kamaruddin</i>	This product converts food waste into compost using the Takakura method.



# OUR FELLOWS' CURRENT PROJECT & HOPE



Prof. Dr. Mohd. Azizuddin bin  
Mohd Sani



<https://www.scopus.com/authid/detail.uri?authorId=35889266000>



Expertise:

- Freedom Of Speech (Political Expression)
- Media Politics
- Human Rights



## CURRENT PROJECT

### Election and Electoral Reforms in the Era of Big Data

Malaysia managed to conduct a very peaceful and competitive 15th General Election recently on 19 November 2022. This has been recognised as a clear evidence that Malaysia is without doubt as a democratic state which political freedom is uphold for the common good. It is imperative to mention that studies about election were essential and CETMA has taken this opportunity to become centre that was aggressively undertaking researches analytically in order to understand election and to expect further improvement of democratisation. One of the important aspects that was pursued is further improvement to Malaysia's electoral system. Therefore, electoral reforms are important to improve further electoral processes, empowerment of institutions and people's right to vote.


Several research projects managed to be secured, namely one FRGS grant on political financing and two researches on general election in states of Kedah and Perak. Besides, there were several book chapters on the topic of election were published. The most importantly, there is one book published by UUM Press in 2022 entitled Prospect of Electoral Reforms in Malaysia. CETMA will aim to become a centre that will continue to study about election particularly by using a new technology of data analytic or big data. This will enhance further the method of studying election and will enrich data to understand the outcome of election. If possible, CETMA wants to see itself as polling station to study about national election in the future.



## HOPE FOR THE FUTURE

I have a bigger hope to see a more stable government that can focus to essential things particularly on people's interests for a better live and economic prosperity. In politics, I also hope that the government will focus to further improve Malaysia's electoral system especially on new policy of political financing, election boundaries and empowerment of electoral institution.

Associate Prof. Dr. Nor  
Idayu binti Mahat

 <https://www.scopus.com/authid/detail.uri?authorId=18434434800>



Expertise:

- Multivariate Analysis
- Big Data Analytics
- Classification Problem



## CURRENT PROJECT

### Pattern Recognition in Big Data

The sophistication of technologies and the capabilities of IOT and the internet have seen an explosion of information on open platforms including open access, social media, and Hansard. The varieties of information now emerge either in unstructured to structured forms, requiring expertise to reach the data and process them for analyses-ready. However, the more important aspect of managing the data achieved is to transform the data into much informative and could be used to guide in decision making. Therefore, continuous efforts in producing various methods of analysing data must always be done in accordance with the data patterns obtained.


Taking into account the importance of continuous efforts in optimizing the information on the data accessed, the project that is being focused is now more directed towards producing a methodology for analysing big data. Focus issues are directed to pattern recognition such as identifying and managing isolated data in big data, evaluating the contribution of information from a variety of variables and adapting the analysis methodology to real problems including performing analysis for real time data. For the purpose of disseminating analysis results, the research interest is to produce analytical dashboards that are needed in the field of management and business. For the purpose of sustainability, the development of talent in the field of analytics is strengthened through the involvement of students in research projects so that more local talents can be groomed according to current national needs.



## HOPE FOR THE FUTURE

My hope in the future is to improve the ability to use analytics in the field of management and business aggressively. Analytics is capable of bringing innovation in decision making as well as improving the sustainability of employees and institutions towards the prosperity of the country.

Associate Prof. Ts. Dr.  
Mohd Faizal Bin Omar

 <https://www.scopus.com/authid/detail.uri?authorId=7102131206>



Expertise:

- Artificial Intelligence
- Decision Support System
- Analytics



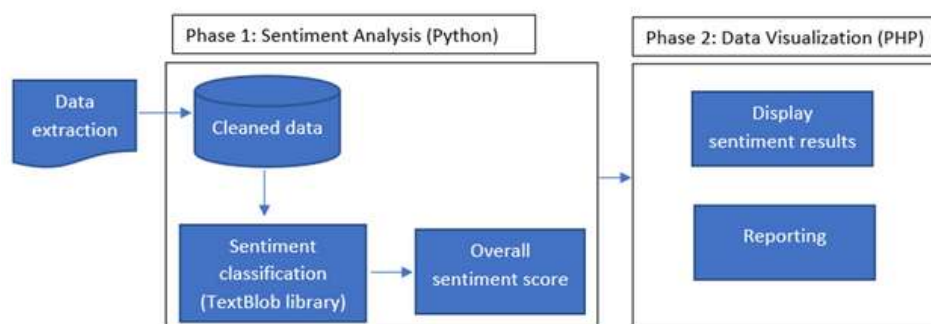
## CURRENT PROJECT

### Social Media Monitoring and Sentiment Analysis

Social media data is rich of insights to improve service, product or policy. However, not many local product develop to cater this needs. In this research, we developed an analytic solution called TRUST where pr1ma project is used as a case study. We capture sentiment analysis whether it is positive, neutral or negative value. The user can monitor the trend of an event; when the most people talked about specific brand. User can also download report and monitor the trend in the visualization. We utilised textblob (lexicon based) and Python, PHP and MySQL as an open source infrastructure for the system. Open source is chosen because it will lower down the cost of system deployment and maintenance when it comes into real commercialisation activities. Our prototype has received feedback from expert in IT and domain expert from government agency and construction industry. The feedback were valuable to improve our solution.

Methodology

- Based on figure below, this research is divided into two phases: sentiment analysis and data visualization.
- Data extraction: the data have been collected from two main social media platforms which are Twitter and Facebook.
- Phase 1: The collected data was first pre-processed before the classification of sentiment were done. Each opinionated tweets were categorized into three categories; positive, neutral and negative.
- Phase 2: The output from Phase 1 have been visualized in the form of dashboard and it displays the results of sentiment analysis and reporting.



## HOPE FOR THE FUTURE

In the "New Malaysian" context, government agencies are looking for strategies to strengthen their newly implemented policies for the nation building. The grassroots or the rakyat's sentiments is very important to develop an inclusive policy with a mixed of bottom-up approach to incorporates the rakyat's opinion. This research develop social media analytics tool with sentiment analysis in order to engage and analyze the rakyat's reviews and opinions. The main purpose of this prototype is to utilize data from social media platforms such as Facebook and Twitter in gaining valuable insights to drive and improve marketing strategy. We hope by developing this solution will enable the user to improve their services or product to the customer and towards the betterment of nation building. In addition, we will continue to improve our solution based on the user feedbacks.

Associate Prof. Dr. Masnita

Hinti Misiran



<https://www.scopus.com/authid/detail.uri?authorId=36682863400>



Expertise:

- Financial Mathematics
- Approximation Theory
- Quantitative Risk Analysis



## CURRENT PROJECT

### Combating Financial Illiteracy through Open Source Digital Tools

Financial literacy is always a challenge. There are numerous programs, initiatives, and activities that are conducted out there, either by Government sectors, universities, industry, and non-government organizations (NGOs). We also notice the rise of influencers that are also trying hard to help the community in improving their financial literacy level. Although the initiatives are good, most of these programs are more on creating awareness among the public. Most of the know-how and technical knowledge is more on budgeting; while more advanced technical programs are focus-oriented and mostly focus on those who already have sound financial literacy, for example on investment through stocks and shares.

Realizing the need to tackle the root cause of this taboo issue, our study is focusing not only to provide an awareness program but also aim to provide solutions, in particular, the understanding of its contributing factors leading to financial literacy/illiteracy, as well as providing the means to understanding own current financial health. This initiative aims to assist the mass (in particular the young adult) to know their strength and weakness and to look out for their triggers, so they are more aware of their financial health. We not only assess their tangible assets and liabilities, but also try to map the emotional aspects of humans, by giving value to potential emotional triggers, either emotional assets, or emotional liabilities. This way, young adults will have more understanding of themselves, for example, what triggers their spending, which factors should they work on to improve their discipline in personal financial management, and what are their wants, versus their needs.


Using available open-source tools and software such as MS Excel, and google-family, our innovation aims to reach more people of any socio-economic background.



## HOPE FOR THE FUTURE

I hope that the year 2023 will bring clarity, stability, and opportunity to not only create products and innovations, but also having ample time to outreach the community through more effective and structured programs to improve the community's knowledge and exposure to digital and financial means, in the – not only as a consumer and user but as creator and innovators.

Associate Prof. Dr. Ani  
Munirah binti Mohamad

 <https://www.scopus.com/authid/detail.uri?authorid=57189290175>



Expertise:

- Cyber Law
- Media Law
- Ict Law



## CURRENT PROJECT

### Harnessing AI technology for qualitative data analysis

Traditional approaches in qualitative analysis data such as pen-and-paper concept, sticky notes and matrix tables in word processing applications have proven to be highly useful in assisting researchers to arrive at reliable findings. Then comes computer-aided qualitative data analysis software (CAQDAS) such as ATLAS.ti as a tool to smartly manage the qualitative data, important points in the data and retrieval of common themes from the data. The next generation of approach for analysing qualitative data is the incorporation of artificial intelligence (AI) technology into CAQDAS to further facilitate the research process. The innovative AI in CAQDAS offers a number of solutions that can suitably be implemented depending on the needs of the study. For instance, the 'word cloud' feature in ATLAS.ti enables the researcher to grasp exactly what is being mentioned by revealing the frequency of the repeated words in the data in cloud format. From the cloud, the researcher would be able to link specific codes to the terms suggested by the software, or openly link codes to the important points. Another AI feature is the powerful 'text search' that allows for specific keywords search (plus synonyms) on the data and consequently, revealing the context in which the keywords appear. If the researcher is into special keywords, such as UUM, Malaysia or COVID19, then 'named entity search' would be another AI-enabled solution offered by ATLAS.ti. AI is also embedded in few other research aspects such as 'concepts search', 'opinion mining' and 'sentiment analysis' of the qualitative data.


My current project involves the harnessing of powerful AI features in CAQDAS (focusing on ATLAS.ti) for both social science and scientific researches. Given the diverse types of big data being generated everyday through qualitative methods, social media as well as research data, coupled with readily available data nowadays from various sources, I believe that AI would facilitate qualitative data analysis tremendously by proposing AI-assisted solutions. Yet, the conclusions and interpretations of the qualitative data still remain in the hands of the researcher and the researcher still remains the mastermind of the research.



## HOPE FOR THE FUTURE

I trust that while AI offers innovative solutions for analysing qualitative data and has great potential in facilitating the research process, what comes along is the know-hows of actually operating CAQDAS applications. For this purpose, I am collaborating with CeTMA to raise awareness among the research community on how to use CAQDAS powerfully. My hope is to be able to introduce the powers of AI technology for qualitative data analysis among postgraduate students, the academia, as well as researchers in general.

Dr. Saadi bin Ahmad  
Kamaruddin

 <https://www.scopus.com/authid/detail.uri?authorId=49361369000>



Expertise:

- Applied Statistics
- Metaheuristic Algorithms
- Data Analytics



## CURRENT PROJECT

### Managing Food Waste through Smart Drying Cabinet

The project that I would like to highlight is the research project funded by the Development and Ecosystem Research Grant Scheme (DEcoR) in the year 2020. In this research, I highlighted an innovation to avoid food waste in the community since food waste is now a highly concerning issue among Malaysians. This unhealthy culture is considered the main challenge to Malaysians as well as the world's food system. These wastes have worrying consequences for land, water, and air pollution, not to mention global warming. Using a smart portable outdoor domestic solar drying cabinet (PODSOD), it is expected that the food waste due to food spoilage can be controlled by food drying techniques. The purpose of this study is to compare the effects of traditional open sun drying (OPS) and novel PODSOD on the physical parameters of salted mackerel fish. The product has been registered under copyright reference number LY2020006542. In this paper, salted dried Mackerel (12 x 5 x 1.5cm) was the main focus. At the first stage, before the product was developed, an analysis of the sun hours, temperature, and humidity at Changlun, Kedah was conducted. After the development of the product, the practicality of the product was examined on fish drying from February 1 to April 30, 2021, using sensors installed within the product. The results were compared to open sun drying technique using similar specifications of samples. Based on the final results, it can be concluded that fish can be dried using the product within 2–3 hours. In the near future, PODSOD will be studied in various geographical settings or with organic variables such as tiny fishes, shrimps, fruits, seaweed, traditional herbs, and flowers which as suggested by previous empirical studies.



## HOPE FOR THE FUTURE

In the future, I plan to conduct more trainings at CeTMA related to Data Analytics and Data Communication. There are huge commercialization values in this arena. This is due to the reason that many firms are using data to achieve their aims as information becomes more valued and available. Companies and workers must learn. Data literacy—learning how to use and convey data—is required. Since departments and management levels have various expertise and are interested in different datasets, their communication demands may vary. No matter the role or goals, data communication makes a person better in their job, more helpful to coworkers, and more valuable to the organisation.





# Part B: Sustainability Office



# **SUSTAINABILITY HIGHLIGHTS**



# CETMA WORKS CLOSELY WITH SDSN- MALAYSIA TO PROVIDE EXPERTISE ON SDG MONITOR FOR MALAYSIA

In its role as the caretaker for Sustainable Development Goals (SDG) efforts and achievement in UUM, CeTMA regularly keeps in contact with relevant stakeholders for SDG locally and abroad. The latest work revolves around the expert contributions to the SDG Assessment for the State Level for Malaysia (SDG Monitor). SDG Monitor is an interactive dashboard which enables users to explore SDG attainment at the national and State levels, the challenges faced as well as suggestions for improvement. SDG Monitor which may be reached here: <https://sdg-for-malaysian-states-sdsn.hub.arcgis.com/> was officially launched on 26 May 2022. The project is spearheaded by the core team of Jeffrey Sachs Center on Sustainable Development, Sunway University, experts contributors, United Nations Sustainable Development Solutions Network (Paris) and few other individuals.

For this purpose, CeTMA coordinates the contributions by five UUM experts involving four relevant SDGs: Dr. Azharudin Ali (TISSA) – SDG1 No poverty, Assoc. Prof. Dr Logasvathi a/p Murugiah (SEFB) and Assoc. Prof. Hazeline Ayoup (TISSA) – SDG8 Decent work and economic growth, Dr. Wan Norhayati Wan Ahmad (TISSA) – SDG9 Industry, innovation and infrastructure and Assoc. Prof. Dr. Ani Munirah Mohamad (SOL) – SDG16 Peace, Justice and Strong Institutions.



Kedah

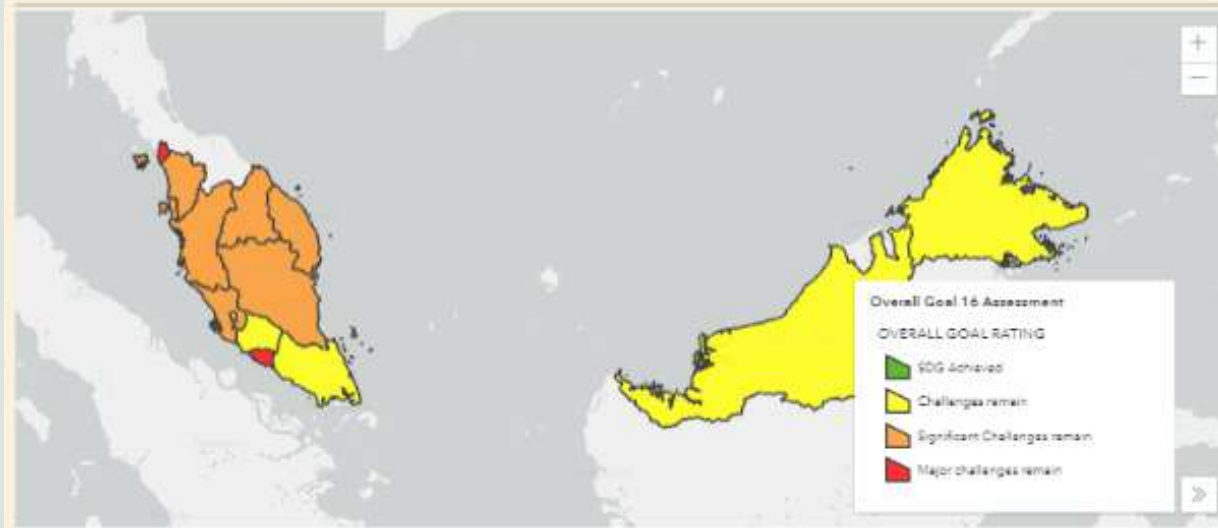
▼ Choose MALAYSIA/ONE STATE/ONE REGION  
 Date is  
 Kedah

SDG 1: NO POVERTY	SDG 2: ZERO HUNGER	SDG 3: GOOD HEALTH AND WELL-BEING	SDG 4: QUALITY EDUCATION	SDG 5: GENDER EQUALITY
<b>RATING</b> Significant challenges remain	<b>RATING</b> Major challenges remain	<b>RATING</b> Significant challenges remain	<b>RATING</b> Significant challenges remain	<b>RATING</b> Major challenges remain
<b>SCORE</b> 76.77	<b>SCORE</b> 50.914	<b>SCORE</b> 80.456	<b>SCORE</b> 77.995	<b>SCORE</b> 41.826
<b>TREND</b> Moderately improving	<b>TREND</b> Not Applicable	<b>TREND</b> Moderately improving	<b>TREND</b> Moderately improving	<b>TREND</b> On track or maintaining SDG achievement

### Overall Performance of SDG 16

The aim of SDG 16: Peace, Justice and Strong Institutions is to promote inclusive and peaceful societies for sustainable development, provide access to justice for all and build inclusive, accountable and effective institutions at all levels. (UN DESA).

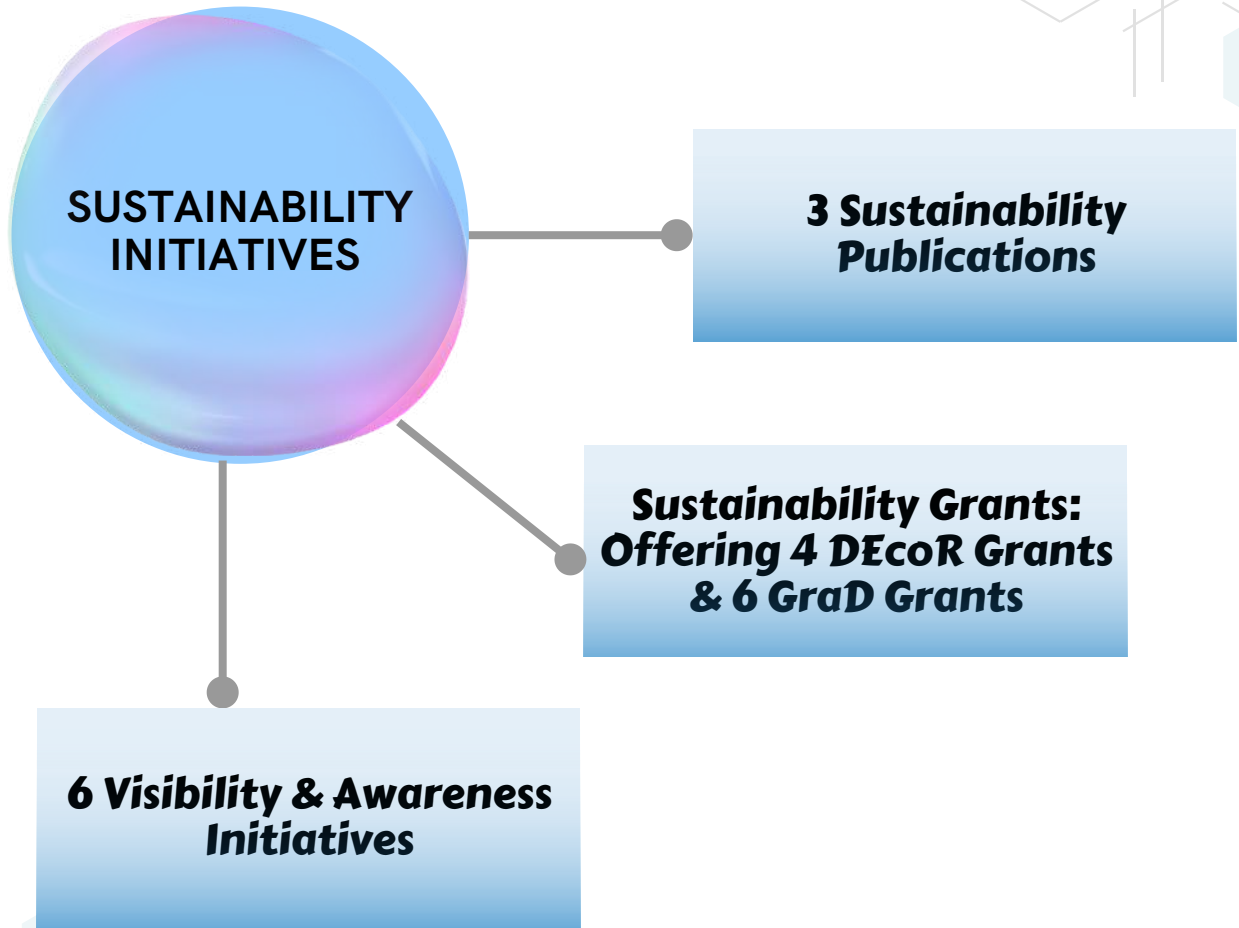
#### OVERALL SDG 16 PERFORMANCE



There are 10 major targets and 2 additional targets found in SDG-16 (using official UN SDG Indicators) as shown below:

# SUSTAINABILITY INITIATIVES

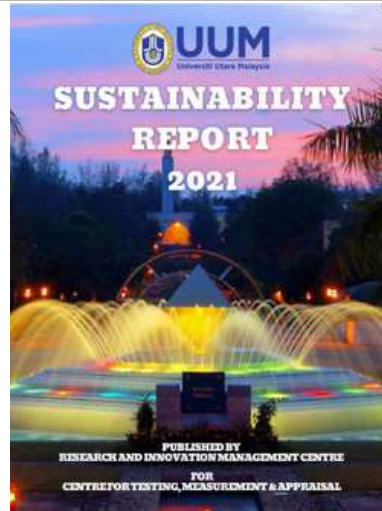






# SUSTAINABILITY PUBLICATIONS

Sustainability Report 2021



Sustainability Bulletin 2022



SUMMARY: DEcoR and GraD PROJECTS





# SUSTAINABILITY GRANTS

Graduate Development Research Grant (GRaD)



**Pembukaan Permohonan 2022**

**Geran Penyelidikan Pembangunan Pelajar (GraD)**

Tarikh tutup: 8 Ogos 2022

*"Memperkasa Pelajar sebagai Agen Perubahan ke Arah Kelestarian Sejahtera"*

**Tema Penyelidikan**

- Pelan alternatif kerjaya bagi graduan baharu. (Alternative career plans for fresh graduates.)
- Pelan pembangunan pelajar dalam inovasi sosial / komuniti saintis / altruisme. (Student development plan in social innovation / scientist community / altruism.)
- Peranan pelajar sebagai "citizen scientists". (The role of students as citizen scientists.)
- Kesihatan mental. (Mental Health.)
- Sumbangan alumni. (Alumni contributions.)
- Undi18 - kesediaan/sentimen (Undi18 - readiness/sentiment.)

maklumat lanjut  
<http://cetma.uum.edu.my>  
019-9104246 (Pn. Rohani)



Development Ecosystem Research Grant (DECOR)



**PEMBUKAAN PERMOHONAN GERAN PENYELIDIKAN PEMBANGUNAN DAN EKOSISTEM (DECOR) 2022**

Tarikh tutup: 21 Ogos 2022

Penyelidikan di bawah Geran ini perlu dipadankan dengan projek pembangunan yang telah dikenalpasti oleh pihak sekretariat.

**MAKLUMAT LANJUT & BORANG PERMOHONAN**  
Pusat Pengujian, Pengukuran dan Penilaian (CeTMA)  
<http://cetma.uum.edu.my>  
0199104246 (Rohani)











## SUSTAINABILITY GRANTS

### LIST OF DECOR GRANTS' RECIPIENTS

NO.	PROJECT	SDG
1.	<p>Title: UUM Green Digital Catalog System Development (eDigHiUUM)</p> <p>Researcher: <i>Dr. Nur Syazwani binti Mohd Nawj, Assoc. Prof. Ts. Dr. Fadhilah binti Mat Yamin, Ts. Wan Hussain bin Wan Ishak, Fatin Liyana binti Abdul Hamid</i></p>	
2.	<p>Title: Developing Low Carbon Energy Model: Reducing Energy Usage and Advancing Efficiency in UUM Buildings</p> <p>Researcher: <i>Dr. Azharudin bin Ali, Assoc. Prof. Dr. Haslinda binti Mohd. Anuar, Assoc. Prof. Dr. Harlida binti Abdul Wahab, Dr. Ayu binti Abdul Rahman, Ts. Dr. Syazwan Syah bin Zulkify, Dr. Wan Norhayati binti Wan Ahmad, Muhammad Zafran Roslan</i></p>	
3.	<p>Title: STASB Smart Universal Design for Disabled Toilets on Campus</p> <p>Researcher: <i>Assoc. Prof. Ts. Dr. Nurul Azita binti Salleh, Ts. Dr. Siti Khadijah binti Hubadillah, Ts. Nur Syuhadathul Amin binti Abdul Aziz, Dr. Muhammad Hafeez bin Abdul Nasir, Dr. Aimi Salihah binti Abdul Nasir</i></p>	
4.	<p>Title: Utilization of Black Soldier Fly Larvae (BSFL) and Anaerobic Digestion for Waste Composting in UUM</p> <p>Researcher: <i>Dr. Hartinee binti Abbas, Ts. Dr. Emy Ezura Bt. A. Jalil, Mohd Syauqi Nazmi, Dr. Zalina binti Zainal, Dr. Nur Marina binti Abdul Manap, LAr. Norani Binti Abu Seman</i></p>	



# SUSTAINABILITY GRANTS

## LIST OF GRAD GRANTS' RECIPIENTS

NO.	PROJECT	SDG
1.	Title: Developing An Altruistic Education Plan To Increase Altruism Among Universiti Utara Malaysia Undergraduates  Researcher: <i>Dr. Noor Azizah binti Ahmad, Dr. Nabisah binti Ibrahim</i>	
2.	Title: Undi18: Readiness and Intention To Vote Among Undergraduate Students Using Predictive Modeling  Researcher: <i>Dr. Chuah Chin Wei, Dr. Ch'ng Chee Keong, Dr. Joyce Cheah Lynn-Sze</i>	
3.	Title: Evaluating Potential of "Ikigai" in Managing Mental Health and Well-being Among Post-Covid19 Undergraduate Students  Researcher: <i>Dr. Joyce Cheah Lynn-Sze, Dr. Mohd. Khairie bin Ahmad</i>	
4.	Title: Design and Developing Gig Platform for STHM's Students Career Development  Researcher: <i>Dr. Nurul Syazana binti Hishamuddin, Dr. Muna Maryam binti Azmy, Dr. Lina Munirah binti Kamarudin, Assoc. Prof. Dr. Shahrul Azmi bin Mohd. Yusof</i>	
5.	Title: Quantifying Professional and Personal Growth of Quantitative and Non-Quantitative Students During Practicum Program  Researcher: <i>Assoc. Prof. Dr. Shamshuritawati binti Sharif, Dr. Sharmila binti Karim, Nik Nadhilah binti Nik Mohd Yusoff</i>	
6.	Title: Voting 18: Assessing Student Readiness to Vote and the Current Level of Their Political Literacy  Researcher: <i>Dr. Muhammad Ali Ridha bin Norman, Prof. Dr. Muhammad Fuad bin Othman, Dr. Siti Darwinda binti Mohamed Pero, Dr. Mohammad Fajar Ikhsan, Dr. Shazwanis binti Shukri</i>	



## VISIBILITY & AWARENESS INITIATIVES

Initiatives	Key
THE Impact Ranking 2023 Submission	<ul style="list-style-type: none"> <li>• Showing commitment to SDG agenda in global scale</li> <li>• Embedding sustainable living in campus operation</li> <li>• Preparing denizen in campus with the sustainable lifestyle towards UUM Living Campus 2030 goal.</li> <li>• Aligning SDG initiatives in campus into SDG 3, 4, 10, 11, 16, 17 for preliminary initiatives towards a more comprehensive goal.</li> </ul>
UUM Strategic Plan Thrust 3: Sustainable Community & Industrial Engagement	<ul style="list-style-type: none"> <li>• Aligning department's performance indicators to support a more global and forward looking SDG agenda</li> <li>• Educating campus denizen on high impact and sustainable outreach program</li> <li>• Empowering campus denizen to be of service to community</li> <li>• Preparing campus into quintuple helix network and Society 5.0.</li> </ul>
Living Campus Website	<ul style="list-style-type: none"> <li>• Dedicated website on sustainable drive and initiatives in campus</li> <li>• One-stop centre to access initiatives based on each UN SDG 2030</li> <li>• Aligning University's initiatives through the lens of THE Impact Ranking on SDG.</li> <li>• A pledge to serve through UN SDG initiatives</li> </ul>
SDG Monitors	<ul style="list-style-type: none"> <li>• One of the seven SDG member institutions.</li> <li>• Contributing experts for data measurement, collection and expert reviews on SDG data.</li> <li>• It aims to provide SDG monitoring based on states in Malaysia</li> <li>• It is hoped that the data can be utilized to better community and provide better program and counter measures for the challenges raised in the website</li> </ul>

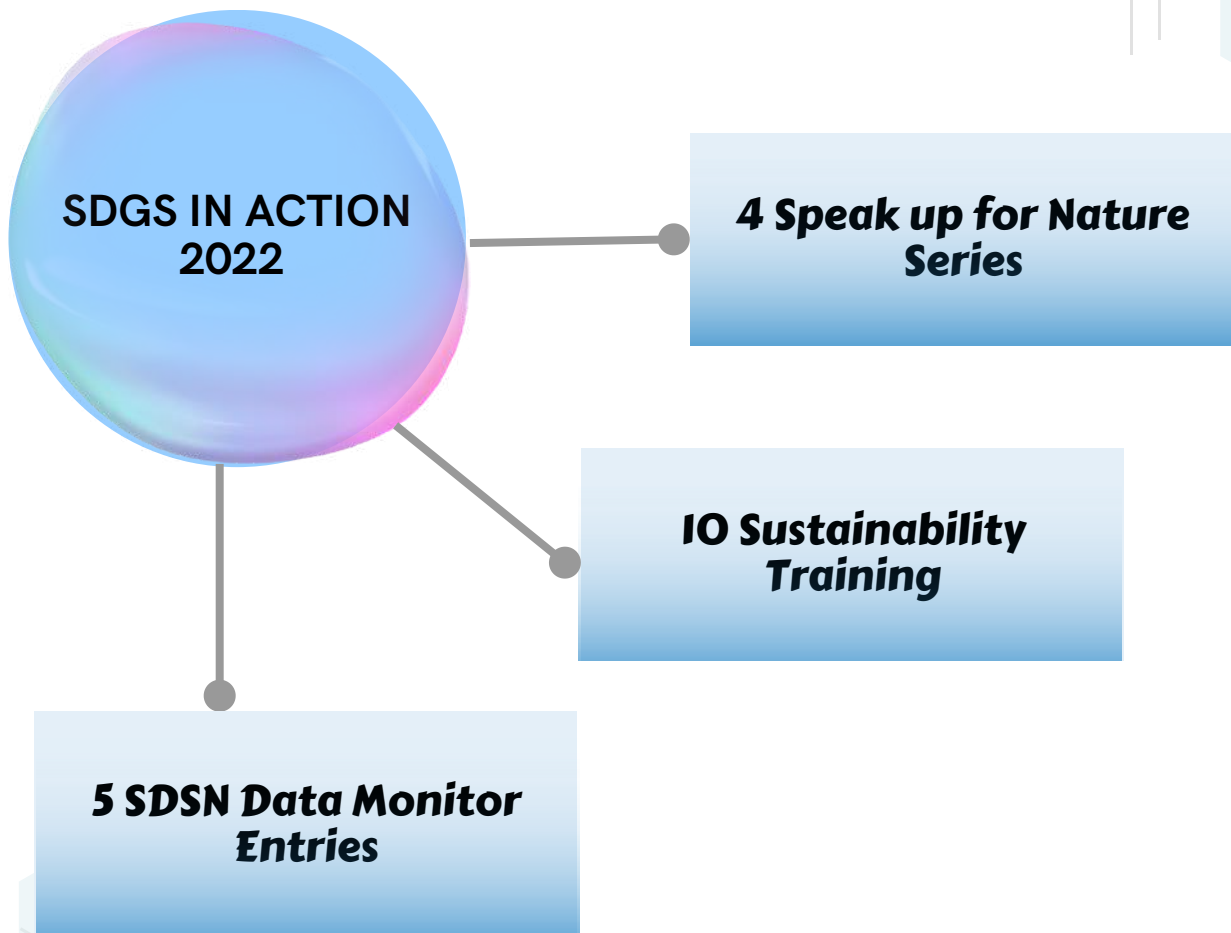


## VISIBILITY & AWARENESS INITIATIVES

Initiatives	Key
THE Awards Asia 2023 Submission	<ul style="list-style-type: none"><li>• Category: Outstanding Contribution to Environmental Leadership</li><li>• This competition aims to acknowledge effort made by institution on sustainability initiatives</li><li>• CeTMA has submitted two entry to this competition</li><li>• The result will be announced on 21-23 June 2023</li></ul>
Massive Open Online Course (MOOC) MYSUN: Bringing Future Campus Today	<ul style="list-style-type: none"><li>• Contribute to Module 7 - Sustainable Lifestyle</li><li>• The creation of this MOOC facilitates access to the knowledge and skills developed to potential participants from socio-economically disadvantaged backgrounds</li><li>• provide an innovative way for HEI students and staff to acquire the related knowledge and skills</li></ul>

# SDGs IN ACTION 2022







# SPEAK UP FOR NATURE SERIES

POSTER	SUMMARY
	<p>"Speak Up for Nature: Symbiosis Effect: An Aspiration from Nature to Research Ideation and Teaching Inspiration," and the talk was delivered by Ts. Dr. Emy Ezura Bt. A. Jalil from the School of Technology Management and Logistics. The goal of the webinar is to show how ideas for research and ideas for teaching can be related through the symbiotic effect.</p>
	<p>A talk has been given by Dr. Azharudin Ali from Tunku Puteri Intan Safinaz School of Accountancy (TISSA-UUM) on Promoting Sustainable Society: Individual and Community Roles and Responsibilities for Speak Up For Nature. All in all, the governance pillar of sustainability refers to actions that maintain a company's values in line with those of society at large, such as truthful accounting, openness, and regulatory compliance. The business's values must also align with those of the community, value chains, and end-user clients.</p>



# SPEAK UP FOR NATURE SERIES

POSTER	SUMMARY
	<p>Malaysia Nature Society shares insights and knowledge on the law and regulations that is important to know, while conducting environmental and sustainable programs.</p>
	<p>Emina is a passionate student who is actively engaged in the Model United Nation. She shares how the understanding of each of the SDG initiatives can help in starting the right conversations and creating the actions to do something to the betterment of community and the planet.</p>





## SUSTAINABILITY TRAINING

INITIATIVE	SUMMARY
<p>Train of Trainers (ToT) for Sustainability Campus Operation: Aligning R.I.C.E.S with Sustainability</p>	<p>This Train of Trainer program is designed to assist university at the operation levels to understand the setting of Living Campus – University Sustainability Plan. In this ToT program, participants will focus on aligning university key elements from the perspective of research, innovation, commercialization, entrepreneurship, and societal (R.I.C.E.S) towards campus sustainable action plan. In the end of the program, participants are expected to produce solid foundation for their department that strategically aligning R.I.C.E.S initiatives towards UUM Living Campus agenda.</p>
<p>ToT for Sustainability Campus Operation: Enhancing Academia through Sustainability Action</p>	<p>In this ToT program, participants will focus on aligning university key elements from the perspective of teaching and learning and academic excellence towards campus sustainable action plan. In the end of the program, participants are expected to produce solid foundation for their department that strategically aligning academic excellence towards UUM Living Campus agenda.</p>
<p>ToT for Sustainability Campus Operation: Spreading Sustainability through University Visibility in Community</p>	<p>In this ToT program, participants will focus on aligning university key elements from the perspective of empowering students to become mobilizers for sustainable community outreach programs, empowering community, as well as increasing university’s visibility towards campus sustainable action plan. In the end of the program, participants are expected to produce solid foundation for their department that can strategically aligning outreaching programs and increased visibility towards UUM Living Campus agenda.</p>
<p>Train of Trainers for Sustainability Campus Operation: Strengthening Campus Sustainability for Better Living</p>	<p>This Train of Trainer program is designed to assist university at the operation levels to understand the setting of Living Campus – University Sustainability Plan. In this ToT program, participants will be exposed to UUM Living Campus 2030 agenda, and a hands-on workshop to develop sustainable plan at micro level. In the end of the program, participants are expected to construct own plan for respective department.</p>



## SUSTAINABILITY TRAINING

INITIATIVE	SUMMARY
Workshop ToT Strategic Plan Thrust 3: Creating High Impact Community Outreach Program Sustainably	Guide participants with UUM's sustainability strategy for KPI purposes in the University's Strategic Plan. This workshop also give exposure to participants about the implementation procedures of the sustainability program as well as community and organizational involvement, while introducing a continuous monitoring procedure for the university's sustainability program at the university level through a dashboard.
Roadshow on Sustainability – Orientation Week for UUM Management Foundation	Delivers practical exposure and knowledge sharing on the UN SDG agenda in a more relatable, and active-based approach. Students are also exposed to the MOOC on Sustainability “MYSUN: Bringing Future Campus Today” which enables students to obtain structured content for sustainable effort on campus. This MOOC is free to access and students will be awarded a certificate of completion once they fulfil some requirements
Roadshow on Sustainability Grant (DeCOR)	Delivers practical exposure on the spirit of sustainable grant vs standard grant in the University. This grant aims to create a living lab approach and focus on outcome-based solutions.
Clinic on Strategic Plan Thrust 3 3Q22 (for red/black PTJs)	Sharing of best practices, troubleshoot, and improve PTJ's understanding on deliverables for thrust 3.
Clinic on Strategic Plan Thrust 3 4Q22 (for red/black PTJs)	Sharing of best practices, troubleshoot, and improve PTJ's understanding on deliverables for thrust 3.
Round table discussion (RTD) HEIs Roles and Positions Towards Sustainable Campus: A Way Forward	This round table discussion aims to discuss the medium and long terms action plan for the sustainability of the Universiti. The discussion will look at issues and strategies in achieving the four pillars of university sustainability, namely people, planet, profit and culture. The results of this round table discussion will support in strengthening campus sustainability policies in line with the University Strategic Plan Phase 3 2021 - 2025.



# SUSTAINABILITY TRAINING

University of the European Programme  
of the Sustainable Future

University of the European Programme  
of the Sustainable Future

Universiti Utara Malaysia  
Date: April 17 & 18, 2022  
Speaker: Assoc. Prof. Dr. Masnita Misran

**Sustainability Campus Operation  
Strengthening Campus Sustainability for Better Living**  
Revisit UUM Living Campus 2030

University of the European Programme  
of the Sustainable Future

University of the European Programme  
of the Sustainable Future

Universiti Utara Malaysia  
Date: April 19th, 2022  
Speaker: Assoc. Prof. Dr. Azeez Ismail

**ToT3: Spreading Sustainability  
through University Visibility in Community**

University of the European Programme  
of the Sustainable Future

University of the European Programme  
of the Sustainable Future

Universiti Utara Malaysia  
Date: September 22, 2022  
Speaker: Assoc. Prof. Dr. Masnita Misran  
& Muhammad Husein Bin Sufik

**Training Internal Talents – Creating high impact  
community outreach program sustainably**  
BENKEL PEMURNIAN DATA TERAS 3

University of the European Programme  
of the Sustainable Future

University of the European Programme  
of the Sustainable Future

Universiti Utara Malaysia  
Date: August 11th, 2022  
Speaker: Assoc. Prof. Dr. Masnita Misran  
Centre for Training, Measurement & Assessment, UUM

**Sustainability & SOG 2030 in Campus for Better Living**  
Anything You Can Help?

**TAKLIMAT  
PENAWARAN  
GERAN DECOR**  
Development and Ecosystem  
Research (DECoR)

11 Ogos 2022, Khamis  
2:30 Petang  
Dewan Seminar Pusat Islam

Ditampikan oleh:  
**Prof. Madya Dr. Masnita Misran**  
Pangarah CA/MA

Mengikuti oleh:  
AP & Szee Oly Associates  
Design Team (DECoR 2020)

Arahan:  
Pusat Pengajian, Pengurusan  
dan Pendidikan (CA/MA)


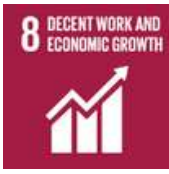
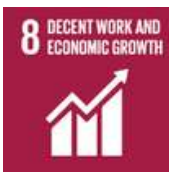


**mysun**

**ROUNDTABLE DISCUSSION 4  
HEIs ROLES AND POSITIONS TOWARDS  
SUSTAINABLE CAMPUS: A WAY FORWARD**

Topics:  
• Talent Grooming and Sustainability Culture in the Workplace  
• Institutional Financial Sustainability  
• Enhancing Efforts in Environmental Cooperation

Date: 20 December 2022 (Tuesday)  
Time: 9:45 AM - 11:45 AM  
Platform:

[www.mysuncampus.eu](http://www.mysuncampus.eu)

Expert Name	SDG	Indicator
Dr Azharudin Ali		<ul style="list-style-type: none"> <li>Poverty headcount ratio at \$1.25/day(%)  <a href="https://sdg-for-malaysian-states-sdsn.hub.arcgis.com/pages/sdg-1-indicator-111-population-under-international-poverty-line">https://sdg-for-malaysian-states-sdsn.hub.arcgis.com/pages/sdg-1-indicator-111-population-under-international-poverty-line</a> </li> </ul>
Associate Prof. Dr Logasvathi Murugiah		<ul style="list-style-type: none"> <li>Proportion of adults (15 years and older) with an account at a bank or other financial institution or with a mobile-money-service provider  <a href="https://sdg-for-malaysian-states-sdsn.hub.arcgis.com/pages/sdg-8-indicator-810-financial-access">https://sdg-for-malaysian-states-sdsn.hub.arcgis.com/pages/sdg-8-indicator-810-financial-access</a> </li> </ul>
Associate Prof. Dr Hazeline Ayoup		<ul style="list-style-type: none"> <li>Proportion of informal employment in total employment, for females &amp; males by states (%)  <a href="https://sdg-for-malaysian-states-sdsn.hub.arcgis.com/pages/sdg-8-indicator-831-informal-employment">https://sdg-for-malaysian-states-sdsn.hub.arcgis.com/pages/sdg-8-indicator-831-informal-employment</a> </li> </ul>
Dr Wan Norhayati Wan Ahmad		<ul style="list-style-type: none"> <li>The Times Higher Education Universities Ranking: Average score of top 3 universities (worst 0-100 best)</li> </ul>
Associate Prof. Dr Ani Munirah Mohamad		<ul style="list-style-type: none"> <li>Homicides (per 100,000 population)  <a href="https://sdg-for-malaysian-states-sdsn.hub.arcgis.com/pages/sdg-16-indicator-1611-homicide">https://sdg-for-malaysian-states-sdsn.hub.arcgis.com/pages/sdg-16-indicator-1611-homicide</a> </li> <li>Proportion of population subjected to domestic violence (%)  <a href="https://sdg-for-malaysian-states-sdsn.hub.arcgis.com/pages/sdg-16-indicator-1613-domestic-violence">https://sdg-for-malaysian-states-sdsn.hub.arcgis.com/pages/sdg-16-indicator-1613-domestic-violence</a> </li> </ul>



# Part C: General



# **WORKPLACE ENVIRONMENT**



**Courtesy Visit to SEAMEO  
Recsam**



**Communal Work at  
CeTMA**

**Green Walk to Puncak  
Vista**

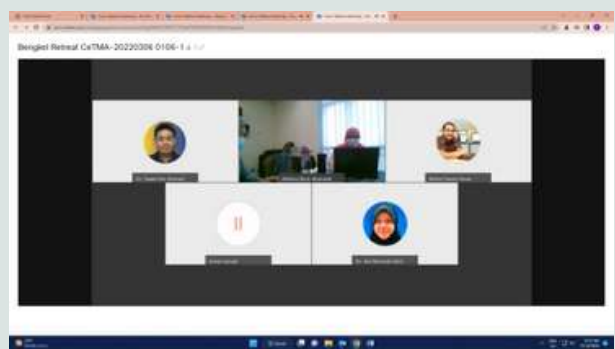
**CeTMA Retreat  
Workshop**



# WORKPLACE ENVIRONMENT

## CeTMA Retreat Workshop

The CeTMA Retreat Workshop is the organization's long-term vision for the future. It is an action plan of goals, projects planned to achieve those goals and metrics to determine success.







# WORKPLACE ENVIRONMENT

## Communal Work at CeTMA

At CeTMA, We believe that a good working condition will produce productive outputs. Thus, we regularly apply 5S. 5S is a workplace organization method that uses a list of five Japanese words: seiri, seiton, seisō, seiketsu, and shitsuke. These have been translated as "sort", "set in order", "shine", "standardize", and "sustain".[1] The list describes how to organize a work space for efficiency and effectiveness by identifying and storing the items used, maintaining the area and items, and sustaining the new organizational system. The decision-making process usually comes from a dialogue about standardization, which builds understanding among employees of how they should do the work.

### General Office



Before



After

### Prayer Room



Before



After

### Administrative Office



Before



After



# WORKPLACE ENVIRONMENT

## Green Walk to Puncak Vista

We also believe that strong mind comes from strong body and soul. Thus, taking care at these two resources are crucial for sustainable lifestyle.





## WORKPLACE ENVIRONMENT

### COURTESY VISIT TO SEAMEO RECSAM!

The Center for Testing, Measurement, and Appraisal (CeTMA) made a courtesy visit to SEAMEO RECSAM and held a discussion session with the professionals at SEAMEO RECSAM on April 7, 2022 (Thursday) at 11.00 am at the Malaysia Room to establish a strategic partnership towards efforts towards educational sustainability throughout the ASEAN region. The meeting was led by the Director of CeTMA, Assoc. Prof. Dr. Masnita Misiran and the Director of the SEAMEO RECSAM Center, Dr. Shah Jahan bin Assanarkutty.

CeTMA had agreed to work with SEAMEO RECSAM in the development of academic modules that support the sustainability of STEM education and that can be used by teachers in Kedah, Malaysia and throughout ASEAN.



# ADVANCING OUR COMMUNITY



**UUM@Community :  
Financial Literacy FOR  
Teenagers**



**UUM@Community : STEM  
SUSTAINABILITY**

**“I Tree I Student”  
Program Empowering  
Student as the Custodian  
of the Earth**

**E-Waste Talks Bring  
Awareness to School  
children**

18 June 2022: Teenagers today are leaders of tomorrow. It is critical to equip them with practical know-how to manage their finances from the early days before them being entrusted with real money in the future.

Students in Mathematical Modeling course, from BSc. Business Mathematics, Universiti Utara Malaysia aim to transfer their knowledge to help the teenagers towards improving their financial literacy through a hands-on program in a half-day program. This program is designed into smaller target groups to increase the effectiveness of program delivery. It took 2 months for the students to develop the appropriate content, facilitated by Associate Prof Dr. Nazihah Ahmad and Associate Prof Dr. Masnita Misiran, who also acts as their course instructors.

Before the program, these university students were also provided with sufficient practical financial knowledge from Mr. Wallace Leong, a licensed financial planner, and technical financial knowledge from their course structures.

A total of 180 participants are involved in this program, comprises of 120 students from SMK Taman Jelutong, SMK Kulim and SMK Lunas, and 60 mentors from the university. The teenagers are selected from three schools from Kulim, Kedah area, one of the districts in Malaysia with the majority of the population residing in the B40 category (the bottom tier of the socio-economy structure in Malaysia). The selection is made in collaboration with the District Education Office Kulim, Kedah. This vulnerable group is given priority as this group is expected to have lower exposure and minimal role models of healthy financial management.

This program is made possible with the collaboration of the Centre for Testing, Measurement & Appraisal, School of Quantitative Sciences, Academic Excellence Education Unit from the Universiti Utara Malaysia, District Education Office Kulim, Schools in Kulim, MYSTEM Ambassador, MYSUN Network, and all the energetic students from SQQM3024 Mathematical Modeling course through the service-learning program.

## UUM@COMMUNITY : FINANCIAL LITERACY FOR TEENAGERS

18 JUNE 2022



Students from Foundation Studies on Management, through class activity AQ0013 Fundamental Mathematics 1 have become agents to increase the level of knowledge among the community through a one-month program through September and October organized by the Centre for Testing, Measurement, and Appraisal (CeTMA), in collaboration with the Centre for Foundation Studies, National STEM Association (Kedah), and MYSUN Network.

In this program, students need to create an activity that utilizes fundamental mathematics knowledge, to increase awareness and exposure towards two important global challenges – sustainable living, and acceptance of science, technology, engineering, and mathematics (STEM) education, to be transferred to the community. There are four selected themes in this program – financial literacy, disaster response, habitat security, and climate change.

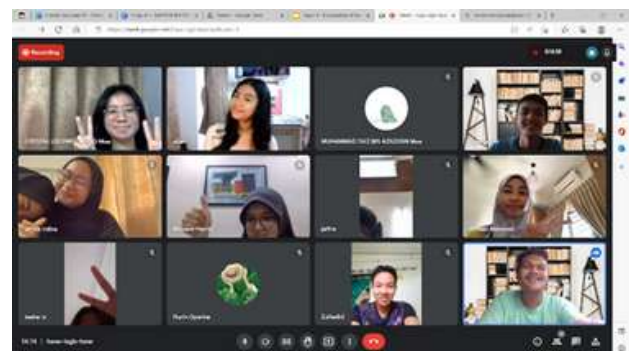
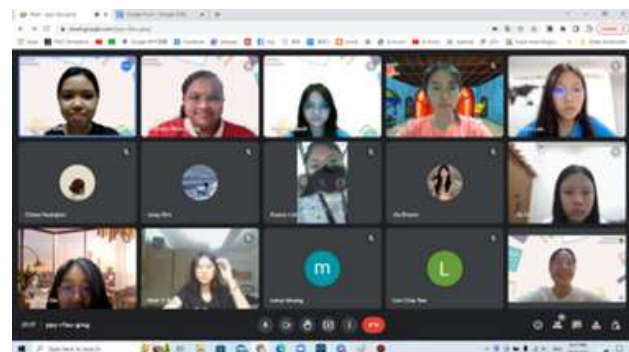
Students are given 5 weeks until the final delivery of the program. They adopted the Explore, Discover, Develop (ExDiD) method to create the projects, in which among its requirement is to provide the transfer of knowledge to recipients, rather than volunteerism or awareness activity. This is in the hope to empower students as well as recipients in the creation of more effective and impactful knowledge retention and innovation.

A total of 202 participants have received benefits from this program.

One facilitator mentioned that he gets a new experience, and understand his talent and ability to share something of value with the community, in particular, personal financial management; while one recipient is thankful that she now knows how to save money and the importance to have emergency savings for a more sustainable living.

## UUM@COMMUNITY : STEM SUSTAINABILITY

11 SEPTEMBER-22 OCTOBER 2022



14th October 2022: A total of 500 Aquilaria trees, known as Karas Trees were successfully planted by new students during the closing day of Universiti Utara Malaysia Orientation Week Session 2022/23.

The program "1 Tree 1 Student" aims to improve student awareness and understanding of the environmental and conservational roles of the forest, as well as student's critical role as an environment's custodian in the era of global warming, in particular towards protecting and preserving natural resources that are richly available on campus, in line with 'UUM University in the Green Forest' tagline of the University, and the United Nation Sustainable Development Goals (SDG) 2030.

Aquilaria trees can naturally produce agarwood from the response of the tree to fungi infection, injury, and pest attack. This tree will produce a kind of oil with a distinctive smell to protect the injured parts such as the stems, branches, and roots. The oil will eventually harden and is known as resin.

The collective efforts by the Centre of Testing, Measurement & Appraisal (CeTMA), Department of Development and Maintenance (JPP),

Department of Student Affairs – Student Development Division (HEPA B2P), and Malaysia Airlines & Tenaga Nasional Berhad (MaTen) Student Residential Halls have mobilized 250 students to complete this mission.

## "1 TREE 1 STUDENT" PROGRAM EMPOWERING STUDENT AS THE CUSTODIAN OF THE EARTH

14 OCTOBER 2022

This program is made possible by full sponsoring of the trees from the Forestry Department Kedah.

\*UUM is an active member of Malaysia Sustainable University Campus Network (MYSUN), an Erasmus+ Capacity Building in Higher Education project that aims to promote Malaysian university campuses as "living laboratories" for sustainability and energy efficiency.





30th October 2022 - The Asian Research Institute for Corporate Governance (ARICG) organized the Electrical and Electronic Goods (E-Waste) Recycling Talk Program at Bandar Baru Sintok National School (SKBBS) recently.

As Program Director, Dr. Mukhriz Mat Rus, said, the objective of the program is to share knowledge related to electrical and electronic waste management with SKBBS teachers and students about the importance of safe E-Waste management.

He said that taking care of e-waste in a safe and organized way will help the environment and give rise to a new generation that is healthy and fit.

The speech was delivered by the Deputy Director of the Center for Testing, Measurement, and Appraisal (CETMA), Dr. Saadi Ahmad Kamaruddin. E-waste can be harmful, is not biodegradable, and builds up in the land, air, water, and other living things in the environment. Toxic substances are released into the environment when methods like open-air burning and acid baths are employed to recover valuable elements from electronic components.

Along with high levels of contaminants like lead, mercury, beryllium, thallium, cadmium, and arsenic, these practices can also expose workers to polychlorinated biphenyls (PCBs) and brominated flame retardants (BFRs), which have been linked to irreversible health effects like cancer, miscarriages, and neurological damage.

At the end of the program, the Director of ARICG, Prof. Dr. Noor Afza Amran, gave Senior Assistant 1, SKBBS, Mr. Abdul Razak Mahmud, a certificate of appreciation.

## E-WASTE TALKS BRING AWARENESS TO SCHOOL CHILDREN

30 OCTOBER 2022



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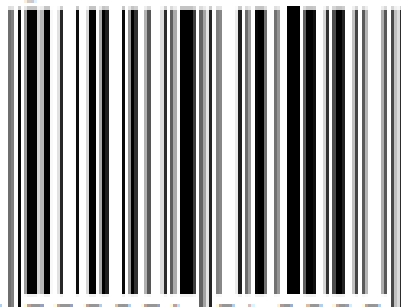
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