2024 INTERNATIONAL CONFERENCE ON TVET EXCELLENCE & DEVELOPMENT

16th - 17th December 2024

Effendi Mohamad

Start Slide

"Empowering Communities Through Knowledge Sustainability: Bridging Academia and Society for Global Progress"

About UTeM

- **First technical public university and the 14th public university overall in Malaysia**
- **Established on 1/12/2000 as Kolej Universiti Teknikal Kebangsaan Malaysia (KUTKM)**
- **Rebranded as Universiti Teknikal Malaysia Melaka (UTeM) on 1/2/2007**

5 Strategic Thrusts

- Empowering TVET, Propelling Careers
- Promoting RICE, generating Income
- Championing Humanism, Enhancing Well-being
- Igniting vibrant ecosystem, sustaining the University
- Uplifiting Values, Captivating Prosperity

Niche Area

Advanced Manufacturing And Computing Technology

GREEN TECHNOLOGY

- Rapid Manufacturing Technology
- Green Materials
- Green Manufacturing
- Lean Manufacturing

SYSTEMS ENGINEERING

- Production Planning & Control
- Quality & Reliability Engineering
- Manufacturing Optimization
- High Voltage Technology

EMERGING TECHNOLOGY

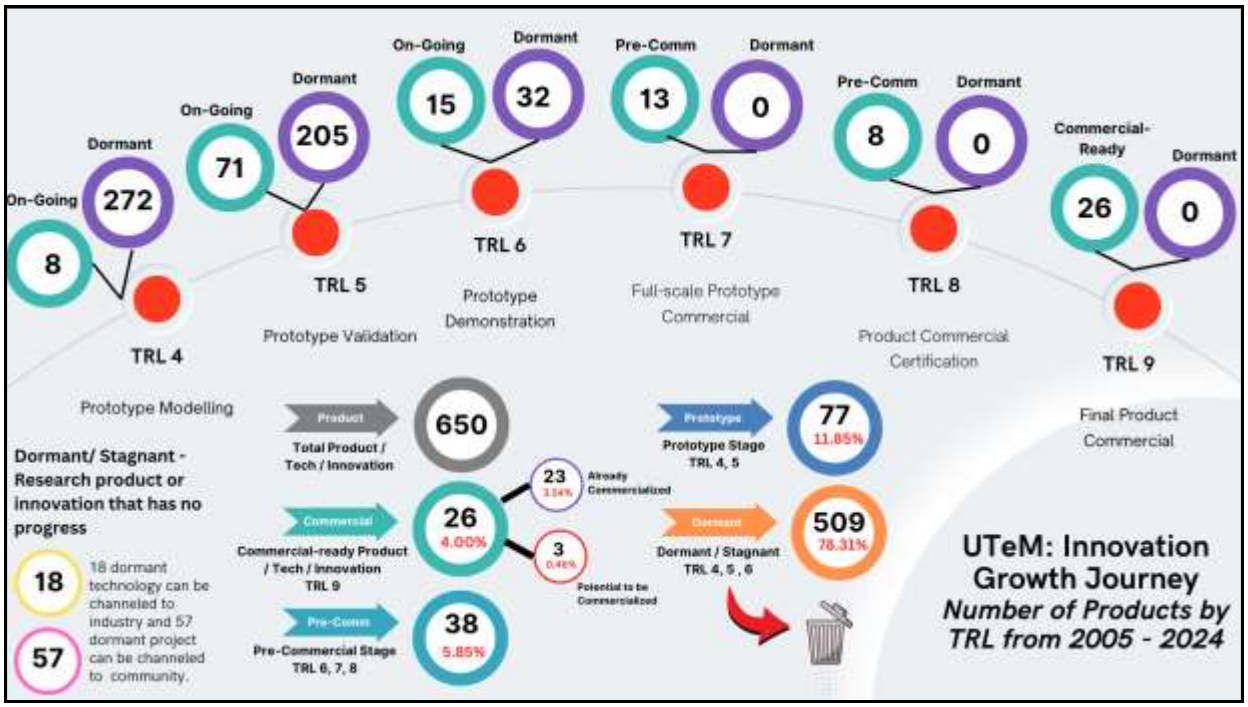
- Advanced Control System
- Computer Systems & Security
- Software & Information Systems
- Human Factor in Production

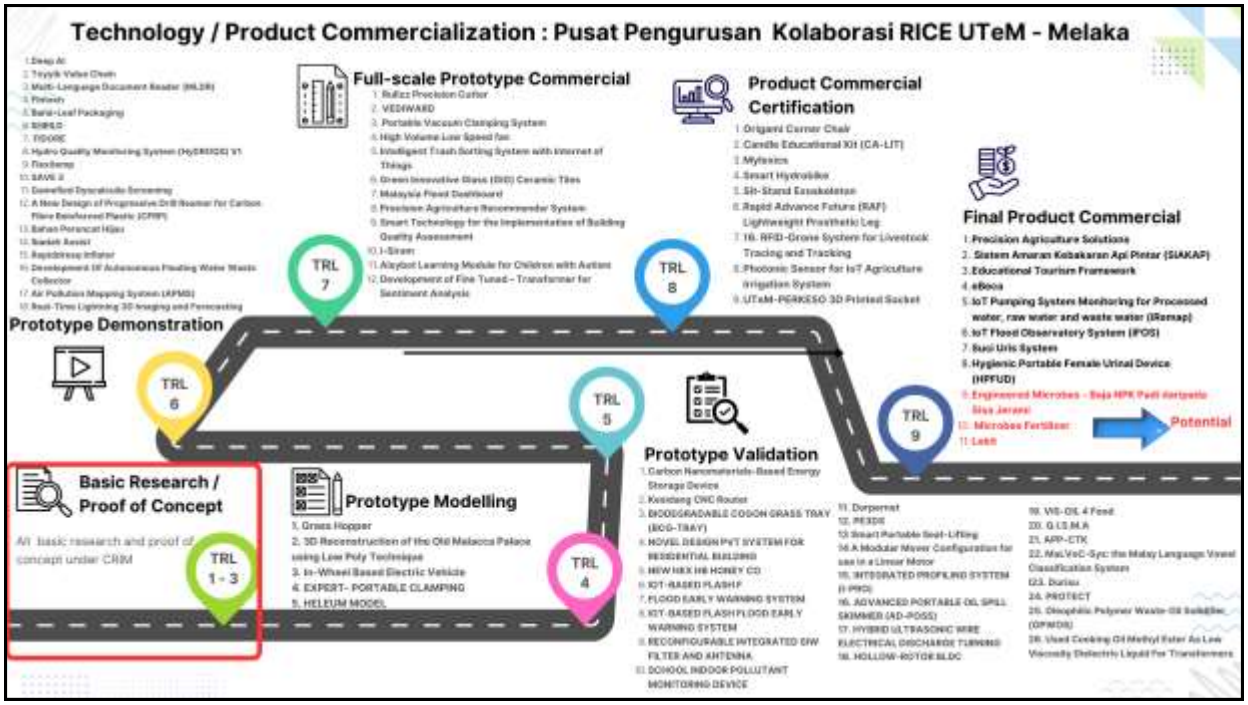
HUMAN-TECHNOLOGY INTERACTION

- Nano Materials
- Virtual & Intelligent Manufacturing
- Advanced Machining & Tooling
- Broadband & Multimedia Systems

Centre for Collaboration Management of RICE UTeM-Melaka

University-Industry Smart Collaboration


On-Going 8
Dormant 272
TRL 4
Prototype Modelling
On-Going 71
Dormant 205
TRL 5
Prototype Validation
On-Going 15
Dormant 32
TRL 6
Prototype Demonstration
Pre-Comm 13
Dormant 0
TRL 7
Full-scale Prototype Commercial
Pre-Comm 8
Dormant 0
TRL 8
Product Commercial Certification
Commercial-Ready 26
Dormant 0
TRL 9
Final Product Commercial
Dormant/ Stagnant - Research product or innovation that has no progress
18
57
18 dormant technology can be channeled to industry and 57 dormant project can be channeled to community.
Product
650
Total Product / Tech / Innovation
Commercial
26
4.00%
Commercial-ready Product / Tech / Innovation TRL 9
23
3.54%
Already Commercialized
3
0.46%
Potential to be Commercialized
Pre-Comm
38
5.85%
Pre-Commercial Stage TRL 6, 7, 8
Prototype
77
11.85%
Prototype Stage TRL 4, 5
Dormant
509
78.31%
Dormant / Stagnant TRL 4, 5 , 6
UTeM: Innovation Growth Journey
Number of Products by TRL from 2005 - 2024


Technology / Product Commercialization : Pusat Pengurusan Kolaborasi RICE UTeM - Melaka
Full-scale Prototype Commercial
1. Rufizz Precision Cutter
2. VEDIWARD
3. Portable Vacuum Clamping System
4. High Volume Low Speed fan
5. Intelligent Trash Sorting System with Internet of Things
6. Green Innovative Glass (GIG) Ceramic Tiles
7. Malaysia Flood Dashboard
8. Precision Agriculture Recommender System
9. Smart Technology for the Implementation of Building Quality Assessment
10. I-Siram
11. Alaybot Learning Module for Children with Autism
12. Development of Fine Tuned – Transformer for Sentiment Analysis
Product Commercial Certification
1. Origami Corner Chair
2. Candle Educational Kit (CA-LIT)
3. Mylexica
4. Smart Hydrobike
5. Sit-Stand Exoskeleton
6. Rapid Advance Future (RAF) Lightweight Prosthetic Leg
7. 16. RFID-Drone System for Livestock Tracing and Tracking
8. Photonic Sensor for IoT Agriculture Irrigation System
9. UTeM-PERKESO 3D Printed Socket
Final Product Commercial
1. Precision Agriculture Solutions
2. Sistem Amaran Kebakaran Api Pintar (SIAKAP)
3. Educational Tourism Framework
4. eBoos
5. IoT Pumping System Monitoring for Processed water, raw water and waste water (iRemap)
6. IoT Flood Observatory System (IFOS)
7. Susi Uris System
8. Hygienic Portable Female Urinal Device (HPFUD)
9. Engineered Microbes – Baja NPK Padi daripada Sisa Jerami
10. Microbes Fertilizer
11. Lain
Potential
Prototype Demonstration
TRL 6
TRL 7
TRL 8
TRL 5
TRL 9
Prototype Validation
1. Carbon Nanomaterials-Based Energy Storage Device
2. Kvasteq CNC Router
3. BIODEGRADABLE COCON GRASS TRAY (ECO-TRAY)
4. HOVEL DESIGN PVT SYSTEM FOR RESIDENTIAL BUILDING
5. HEW HEX HB HONEY CO
6. IOT-BASED FLASH F
7. FLOOD EARLY WARNING SYSTEM
8. IOT-BASED FLASH FLOOD EARLY WARNING SYSTEM
9. RECONFIGURABLE INTEGRATED DW FILTER AND ANTENNA
10. SCHOOL INDOOR POLLUTANT MONITORING DEVICE
11. Dorpernat
12. PESDE
13 Smart Portable Seat-Lifting
14 A Modular Mover Configuration for use in a Linear Motor
15. INTEGRATED PROFILNO SYSTEM (I-PRO)
16. ADVANCED PORTABLE OIL SPILL SKIMMER (AD-POSS)
17. HYBRID ULTRASONIC WIRE ELECTRICAL DISCHARGE TURNING
18. HOLLOW-ROTOR BLDC
19. VIS-OIL 4 Food
20. G.I.S.M.A
21. APP-CTK
22. MaLVoC-Syc the Malay Language Vowel Classification System
23. Durian
24. PROTECT
25. Oleophilic Polymer Waste Oil Solidifier (OPWOS)
26. Used Cooking Oil Methyl Ester As Low Viscosity Dielectric Liquid For Transformers
Basic Research / Proof of Concept
All basic research and proof of concept under CRIM
TRL 1 - 3
Prototype Modelling
1. Grass Hopper
2. 3D Reconstruction of the Old Malacca Palace using Low Poly Technique
3. In-Wheel Based Electric Vehicle
4. EXPERT- PORTABLE CLAMPING
5. HELEUM MODEL
TRL 4

Dormant Technologies Reinnovation / Transfer

Industry

18

Potential Technologies

- In-House Hybrid Graphene Based Stretchable Conductive Ink (SCI) For Flexible Electronic
- Prototype Development of Ergonomic grinding System to Bevel a Pipe for Welding
- The HVAC Inspection Crawler
- Tunnel Inspection Robot
- Piezoelectric Micro-Generator
- Farm Management System Using RFID
- Embedded Vision Technology for Smart Scale System

Example Technologies

Community

57

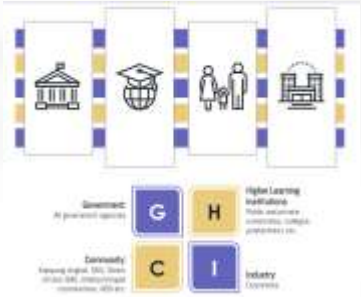
Potential Technologies

- Hybrid Batik Printing System
- Virtual Reality Training for Fire Safety Education Integrated With The Oculus Rift
- Agri-Snaps Magnetic Snaps IoT Weather Monitoring System
- Autonomous Retrofit Self-Driving based Voice Recognition Controller for Manual Wheelchair
- The Development of Poultry Eggs Incubator for Hatching System with Internet of Things (IoT)
- E-learning for Disability: An Assistive Multimedia Courseware

★★★★★

UNIVERSITY COMMUNITIES

The quadruple helix interaction between university Sustainable Development Goals (SDGs), and the Ministry of Higher Education's strategic plan is a synergistic framework that drives societal progress. Universities play a pivotal role in advancing the SDGs by integrating sustainability into their research, education, and community outreach. This alignment with global goals ensures that higher education institutions contribute to addressing pressing challenges like poverty, inequality, and environmental degradation.



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UNIVERSITY COMMUNITIES

Communities and society at large benefit significantly from this collaboration. Through knowledge transfer initiatives, universities provide communities with the tools and expertise needed to tackle local challenges, from improving health outcomes to enhancing environmental sustainability. This exchange of knowledge and skills empowers communities, leading to sustainable economic and social development that is both inclusive and resilient.

SDG

Sustainable Development Goal

Sustainable Development Goals (SDG) are a collection of 17 global goals aimed at improving the planet and the quality of human life around the world by the year 2030.

KNOWLEDGE SUSTAINABILITY

BRIDGING UNIVERSITY AND COMMUNITIES

Universities play a crucial role in fostering knowledge sustainability by extending their expertise and resources to benefit communities. This involves the active transfer of knowledge, skills, and innovations from academic institutions to these communities, empowering them to solve local challenges and improve their quality of life.

Through outreach programs, collaborative projects, and community-based research, universities contribute to sustainable development by addressing pressing issues such as education, healthcare, agriculture, and environmental conservation. Faculty, students, and researchers engage with local communities to share best practices, provide training, and co-create solutions tailored to specific needs.

By acting as catalysts for social change and development, universities help build local capacity, enhance educational opportunities, and promote economic growth, ensuring that the benefits of higher education extend beyond campus borders to create lasting positive impacts in society.

OUR *COMMUNITIES*

TOTAL

19 Community


TS. DR. NURUL HANIM RAZAK
FTKM
PROJECT 1
WASTE TO WEALTH
Problem Statement
The W2W outreach community program is a proactive approach to environmental sustainability and community empowerment - reduces pollution by converting waste cooking oil (WCO) into marketable products such as candles, soap, and natural insect repellent (NIR), but it also promotes community upskilling and green technology adoption.
Technology
SOAP -> Saponification for Soap (+NaOH)
CANDLE -> Blending for Candles (+Palm Wax)
NATURAL INSECT REPELLENT -> Formulation for Insect Repellent (+active herbs)
Community
Pantai Kundur Community
30 entrepreneurs
Strategic Partners
VALUE
RM12,000
ST2
11
LANDASAN KPT

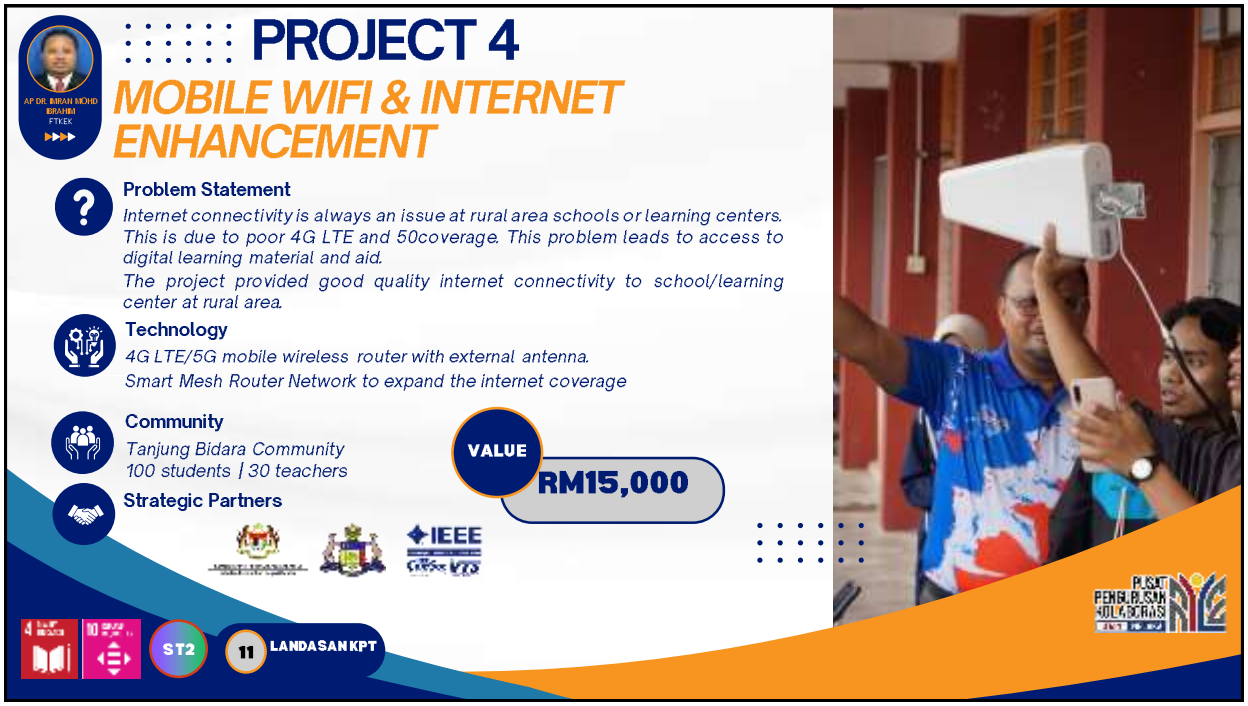

TS. DR. NURUL HANIM RAZAK
FTKM
PROJECT 1
WASTE TO WEALTH


PROF. IR. DR. GAN CHIN KIM
FTKE
PROJECT 2
SOLAR INSTALLATION
Problem Statement
There are several locations within the area that are in dire need of lighting. These include village roads, fishermen's jetty and surau. Multiple requests with the local authorities have been made, however, installation has been delayed due to problems such as budget and land rights issue.
Knowledge transfer provided about solar lighting to local villagers particularly in troubleshooting and maintenance skills for the solar lighting system installed.
Technology
Solar Lamps
Community
Pantai Kundur Community
Strategic Partners
VALUE
RM 5,020
ST2
11
LANDASAN KPT
DUTA TVET UTeM


DUTA TVET UTeM
PROJECT 2
SOLAR INSTALLATION

DR. CHANG SIANG YEE
FTKIP
PROJECT 3
ORGANIC COMPOST
Problem Statement
The targeted community lacks adequate knowledge and expertise in the making of organic compost, impeding their capacity to participate in sustainable environment efforts.
Knowledge transfer provided about organic compost production to community to increase the community's awareness of recycling and upcycling initiatives.
Technology
Takakura Method for Efficient Composting Approach
Community
Tanjung Bidara Community
100 students | 15 teachers
Strategic Partners
VALUE
RM5,000
ST2
11
LANDASAN KPT

DR. CHANG SIANG YEE
FTKIP
PROJECT 3
ORGANIC COMPOST


AP DR. IMRAN MOHD IBRAHIM
FTKEK
PROJECT 4
MOBILE WIFI & INTERNET ENHANCEMENT
Problem Statement
Internet connectivity is always an issue at rural area schools or learning centers. This is due to poor 4G LTE and 50coverage. This problem leads to access to digital learning material and aid.
The project provided good quality internet connectivity to school/learning center at rural area.
Technology
4G LTE/5G mobile wireless router with external antenna.
Smart Mesh Router Network to expand the internet coverage
Community
Tanjung Bidara Community
100 students | 30 teachers
VALUE
RM15,000
Strategic Partners
IEEE
ST2
11
LANDASAN KPT


SEKOLAHKU SDARY SEJAHTERA
DUTA TVET UTeM
AP DR. IMRAN MOHD IBRAHIM
FTKEK
PROJECT 4
MOBILE WIFI & INTERNET ENHANCEMENT
DUTA TVET UTeM


DR. ZURINA SA'AYA
FTMK
PROJECT 5
MICRO:BIT
Problem Statement
Limited access to quality STEM education, particularly in the area of coding and electronics can hinder student's ability to develop critical thinking, creativity and problem-solving skills which vital for their future academic and career success.
The project provided students with foundational knowledge and practical skills in coding and electronics using Micro:bit platform, fostering creativity, critical thinking and problem-solving abilities through hands-on learning experiences.
Technology
Micro:bit
Community
Tanjung Bidara Community
100 students | 15 teachers
Strategic Partners
micro:bit
ST2
11
LANDASAN KPT


DR. ZURINA SA'AYA
FTMK
PROJECT 5
MICRO:BIT


DR. SITI AZIRAH ASMAI
FTMK
PROJECT 6
DIGITAL NIAGA
Problem Statement
Entrepreneurs in rural areas often lack the digital skills needed to grow and manage their businesses effectively. This gap limits their ability to improve operations, reach more customers, and make informed decisions.
Without proper training in digital tools like business dashboards, these entrepreneurs miss out on opportunities to increase revenue and run their businesses more efficiently. The technology sharing in the project has improved competencies of entrepreneurs
Technology
Digital technology to enhance business capabilities
Community
Bukit Katil Community
20 GIAT MARA Students | 4 entrepreneurs
Strategic Partners
VALUE
RM 3,890
ST2
11
LANDASAN KPT


DUTA TVET UTeM
DR. SITI AZIRAH ASMAI
FTMK
PROJECT 6
DIGITAL NIAGA
Program
DUTA TVET UTeM
TG. BIDARA | PANTAI KUNDUR | BUKIT KATIL


DR. NURUL ZARIRAH NIZAM
FPTT
PROJECT 7
E-COMMERCE
Problem Statement
E-commerce provides an easy way of selling products to a large customer base. However, there is lot of competition among multiple e-commerce sites, and increasing of customers expectations. Understanding and preparing for these challenges will make entrepreneur's e-commerce journey efficient.
Knowledge sharing through this project allows the community to receive benefits and can increase their income through online sales.
Technology
E-commerce
Community
Ayer Keroh Community
55 students
Strategic Partners
VALUE
RM 5,300
ST2
11 LANDASAN KPT
PUSAT PENGUASAAN KOLEJ KOMUNITI


DR. NURUL ZARIRAH NIZAM
FPTT
PROJECT 7
E-COMMERCE
PUSAT PENGUASAAN KOLEJ KOMUNITI
DUTA TVET UT


PROJECT 8
URBAN VERTICAL FARMING
DR. AHAMED FAYEEZ TUANI IBRAHIM
FTKEK
Problem Statement
The Orang Asli community faces significant income instability due to relience on rubber tapping and selling forest goods which are heavily affected by monsoon season. This resulted in financial insecurity.
Limited access to modern farming technologies leading to inefficient agricultural practices and suboptimal crop yields. The project outcome is expected to reduce the environmental footprint by optimizing land usage and provides sustainable secondary incomes.
Technology
Urban Vertical Farming
Internet of Things (IoT) Monitoring
Data Analysis
VALUE
RM100,000
Community
Orang Asli Community in Bukit Payong Alor Gajah
Strategic Partners
JAKOA
ST2
11 LANDASAN KPT
PUSAT PEMBANGUNAN MASYARAKAT ORANG ASLI


PROJECT 8
URBAN VERTICAL FARMING
DR. AHAMED FAYEEZ TUANI IBRAHIM
FTKEK
PUSAT PEMBANGUNAN MASYARAKAT ORANG ASLI


DR. MOHD RUSDY YAACOB
FTKE
PROJECT 9
SOLAR-POWERED AQUAPONIC SYSTEM
Problem Statement
With the increase in the cost of living and the reduction of food resources, the people, especially the Asnaf group, single mothers, and the B40 group are very affected by this situation.
The development of a smart farming system based on the concept of solar-powered aquaponic systems for local residents, for example consisting of the Asnaf group, single mothers, and B40 in Krubong, Melaka.
Technology
A solar-powered aquaponic system with an IoT system
Community
Kg. Tanah Merah, Krubong Community
50 family members
VALUE
RM60,000
Strategic Partners
ICES
ST2
11 LANDASAN KPT


PROJECT 9
SOLAR-POWERED AQUAPONIC SYSTEM


AP DR. IMRAN MOHD IBRAHIM
FTKEK
PROJECT 10
SMART FERTIGATION FARMING SYSTEM
Problem Statement
The community in Durian Tunggal faces significant output instability due to the heavily affected by the monsoon season. This results in periods of financial insecurity.
Limited access to modern farming technologies leading to inefficient agricultural practices and suboptimal crop yields. The implementation of smart fertigation system provides a reliable secondary income.
Technology
Smart Fertigation Farming System
Internet of Things (IoT) Monitoring
Simple Data Analytics
Community
Parit Melana, Durian Tunggal Community
10 youths
Strategic Partners
VALUE
RM 55,000
ST2
11 LANDASAN KPT


PROJECT 10
SMART FERTIGATION FARMING SYSTEM
AP DR. IMRAN MOHD IBRAHIM
FTKEK


TS. DR. NURUL HANIM RAZAK
FTKM
PROJECT 11
WASTE TO WEALTH
Problem Statement
In Malaysia, improper disposal of cooking oil (WCO) waste has major environmental and economic consequences. WCO can be effectively reused into soap, candles, and insect repellent.
By repurposing WCO, the project aims to decrease pollution, reduce landfill waste, and lower the overall carbon footprint associated with traditional disposal methods.
Technology
SOAP -> Saponification for Soap (+NaOH)
CANDLE -> Blending for Candles (+Palm Wax)
NATURAL INSECT REPELLENT -> Formulation for Insect Repellent (+active herbs)
Community
50 Senior citizens (PEWE Melaka)
50 OKU Children
VALUE
RM 35,000
Strategic Partners
PDK
ST2
11
LANDASAN KPT
PUSAT PENGLIBATAN MASYARAKAT


PROJECT 11
WASTE TO WEALTH
TS. DR. NURUL HANIM RAZAK
FTKM
Komuniti@UniMADANI
LIVING LAB
PUSAT PENGLIBATAN MASYARAKAT


TS. DR ALIZA CHE AMRAN
FTKE
PROJECT 12
ELECTRICAL COMPOSTER
Problem Statement
Solid waste produced by local communities contaminates their surroundings. Thus, Melaka as a popular tourist destination requires effective solid waste management to maintain its appeal and environmental sustainability.
The solution is to collect their solid waste (food and seafood waste) and quickly dispose them using an electrical composter. By reutilizing food waste, it will increase recycle rate and lower GHG emission by reducing solid waste send to the landfill.
Technology
Electrical Composter -> Faster composting times
Solar Panel -> Generate clean electrical energy
Compost Fertilizer -> Formulation for fertilizer (+bulking agents)
Community
Pantai Siring Community
VALUE
RM50,000
Strategic Partners
ST2
11 LANDASAN KPT


PROJECT 12
ELECTRICAL COMPOSTER


TS. DR ALIZA CHE AMRAN
FTKE
PROJECT 13
COMPOSTER FACILITY
Problem Statement
Public participation in solid waste separation program is low. One of the reasons is due to inconvenient solid waste separation service (recyclable items contaminated with food waste). The solution is to collect food waste and quickly dispose them using an electrical composter.
The project goals is to educate the public by demonstrating how food waste can be converted into quality compost using an electrical composter. It create benefits from the produced fertilizer either to be sold as fertilizers or to use them in their community garden.
Technology
Electrical Composter -> Faster composting times
Solar Panel -> Generate clean electrical energy
Compost Fertilizer -> Formulation for fertilizer (+bulking agents)
Community
Taman Dato' Abdul Aziz Community Jasin
VALUE
RM50,000
Strategic Partners
ST2
11 LANDASAN KPT

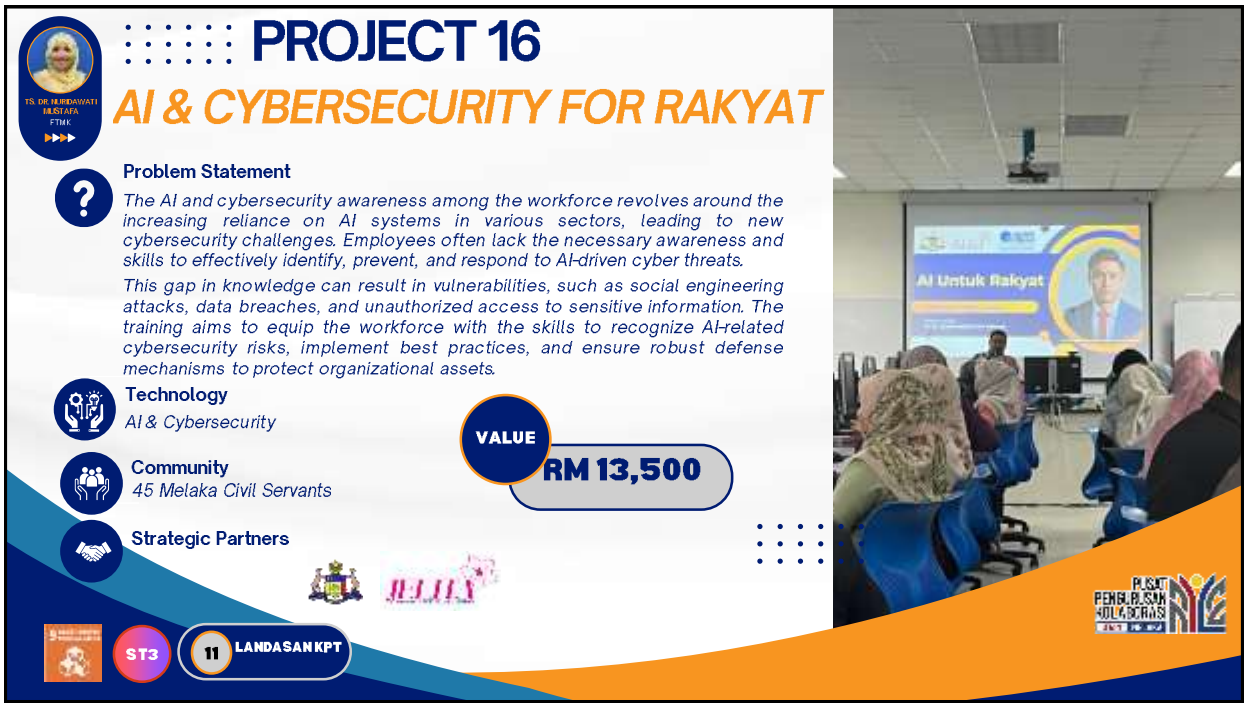

PROJECT 13
COMPOSTER FACILITY
TS. DR ALIZA CHE AMRAN
FTKE


PROJECT 14
PHYSIOTHERAPY REHABILITATION
Problem Statement
Stroke is a major public health concern in Malaysia with devastating consequences that frequently necessitate lenghty rehabilitation efforts. Stroke patients and patients with movement disability in leg or hand injuries frequently require long-term rehabilitation to regain lost motor function and survival in daily activities, which typically achieved through a physiotheraphy program combined with conventional intervention.
The project will improve quality of life using rehabilitation technology to speed up the recovery process and increase the ability to participate productively in society.
Technology
Rehabilitation technology -> robotics & wearable devices
Community
50 Stroke patients
Strategic Partners
VALUE
RM 100,000
ST2
11 LANDASAN KPT


PROJECT 14
PHYSIOTHERAPY REHABILITATION
https://www.youtube.com/watch?v=5YEQNexD7MY
SEDEKAD
MEMACU REVOLUSI REHABILITASI


MOHAMMAD RAFI OMAR
FTKM
PROJECT 15
3D PRINTED PROSTHETIC LEG
Problem Statement
There are many prosthetics in the market these days; however users do not comply with them particularly materials related to human legs, which are heavy and difficult to use.
The technology improves patients mobility, independence and overall quality of life. It facilitates the reintegration of beneficiaries into society and the workforce by reducing physical barriers, thus promoting social and economic inclusion and reducing the financial burden.
Technology
3D Scanning -> faster measurement
3D Printing SLS -> Generate fast product and cheaper price
Community
8 Beneficiaries
Strategic Partners
VALUE
RM 50,000
ST2
11 LANDASAN KPT


MOHAMMAD RAFI OMAR
FTKM
PROJECT 15
3D PRINTED PROSTHETIC LEG


TS. DR NURIDAWATI MUSTAFA
FTMK
PROJECT 16
AI & CYBERSECURITY FOR RAKYAT
Problem Statement
The AI and cybersecurity awareness among the workforce revolves around the increasing reliance on AI systems in various sectors, leading to new cybersecurity challenges. Employees often lack the necessary awareness and skills to effectively identify, prevent, and respond to AI-driven cyber threats.
This gap in knowledge can result in vulnerabilities, such as social engineering attacks, data breaches, and unauthorized access to sensitive information. The training aims to equip the workforce with the skills to recognize AI-related cybersecurity risks, implement best practices, and ensure robust defense mechanisms to protect organizational assets.
Technology
AI & Cybersecurity
Community
45 Melaka Civil Servants
Strategic Partners
VALUE
RM 13,500
ST3
11 LANDASAN KPT
AI Untuk Rakyat


ICE BREAKING SESSION
AI Untuk Rakyat
TS. DR. NURIDAWATI MUSTAFA
FTMK
PROJECT 16
AI & CYBERSECURITY FOR RAKYAT

PROJECT 17

AIRCOND SERVICE TECHNICAL ENTREPRENEUR

Problem Statement

Malaysia is still lacking in a sufficient number of entrepreneurs with the technical expertise to start and grow enterprises. By addressing this gap through training, it can foster new businesses that create jobs, drive innovation, and stimulate economic growth. These entrepreneurs can contribute to the state's economy by introducing competitive products, improving energy efficiency, and increasing the overall industrial output.

Hence this KSTP will train and nurture new technical entrepreneurs in the area of air-conditioner servicing.

Technology
Air-conditioner Service

Community
8 Youth TVET ENTREPRENEUR

Strategic Partners

VALUE **RM 20,005**

ST3 | 11 LANDASAN KPT

PUSAT PENGLIBATAN MASYARAKAT

PROJECT 17

AIRCOND SERVICE TECHNICAL ENTREPRENEUR

1. **Ahmad Abdullah Bin Muhamad**
   Name of Company: Prime HVAC Technologies
   No. SSM: 202109274581Code SSM: (NS0192847-T)
2. **Ahmad Lokhman Bin Ishak**
   Name of Company: Aurora Ventilation Services
   No. SSM: 202210134875Code SSM: (NS0367842-X)
3. **Ahmad Razif Bin Rozman**
   Name of Company: Dynamics Technology Enterprise
   No. SSM: 202112084762Code SSM: (NS0157389-K)
4. **Muhamad Amir Bin Rosly**
   Name of Company: Alai Aircond Solutions
   No. SSM: 202307286754Code SSM: (NS0451278-V)
5. **Muhammad Basyiq Bin Rahim**
   Name of Company: MSF Solutions Enterprise
   No.SSM: 202303195672Code SSM: (NS0461253-P)
6. **Muhammad Solihin Bin Samat**
   Name of Company: Air Cond Control Enterprise
   No. SSM: 202311102847Code SSM: (NS0487251-Q)
7. **Syaiful Nizam Bin AlifAlamat**
   Name of Company: Ayli Technology Enterprise
   No. SSM: 202103283860 Code SSM: (NS0259841-N)10)
8. **Imran Husaini Bin Khairudin**
   Name of Company: Harmony Refrigeration Solutions
   No. SSM: 202208116354Code SSM: (NS0329841-R)

ST3 | 11 LANDASAN KPT

Strategic Partners

PUSAT PENGLIBATAN MASYARAKAT


TS. OMAR FARUZ ZAHMANI
Leader
PROJECT 16
AIRCOND SERVICE TECHNICAL ENTREPRENEUR


TS. MUHAMMAD SUHAEAN BIN SULONG
FTMK
PROJECT 18
TVET DIGITAL LEARNING
Problem Statement
TVET instructors are experiencing challenges in engaging TVET students in teaching & learning activities. Without hands-on and practical knowledge of TVET digital, delivery of teaching can be ineffective. The exposure of latest technology adoption can assist TVET instructors in developing digital TVET
Hence this KSTP will expose TVET instructors on digital tools in preparing their teaching contents.
Technology
H5P, Wakelet, ChatGPT, CoPilot, GoSoapBox, Mentimeter
Community
100++ from different TVET Institutions
Strategic Partners
VALUE
RM 50,000
ST3
11 LANDASAN KPT


TS. MUHAMMAD SUHAIZAN B.N SULONG
Leader
PROJECT 18
TVET DIGITAL LEARNING


MAZRAN BIN ESRO
FTKEK
PROJECT 19
FLOOD DETECTOR/SENSOR SYSTEM
Problem Statement
Flash floods occur quickly and unexpectedly causing damage to property, destruction of infrastructure, loss of business and involving significant maintenance costs for the state government and the people of Melaka. Without a warning system, residents do not have time to save valuable items when flash floods occur, especially in high-risk areas.
Hence, to reduce the risk of property damage and destruction, the technology provided will become a detector / sensor system to enable residents and law enforcement to receive flood warning notifications through mobile phone applications.
Technology
Flood detector/ sensor system
Community
Masjid Tanah
Strategic Partners
VALUE
RM 50,000
ST3
11
LANDASAN KPT

TVET

TVET is an acronym that stands for Technical and Vocational Education and Training.

Various terminologies

- Vocational Education…
- Apprenticeship Training…
- Occupational Education …
- Vocational Education and Training..
- Career and Technical Education…
- Workforce Education…

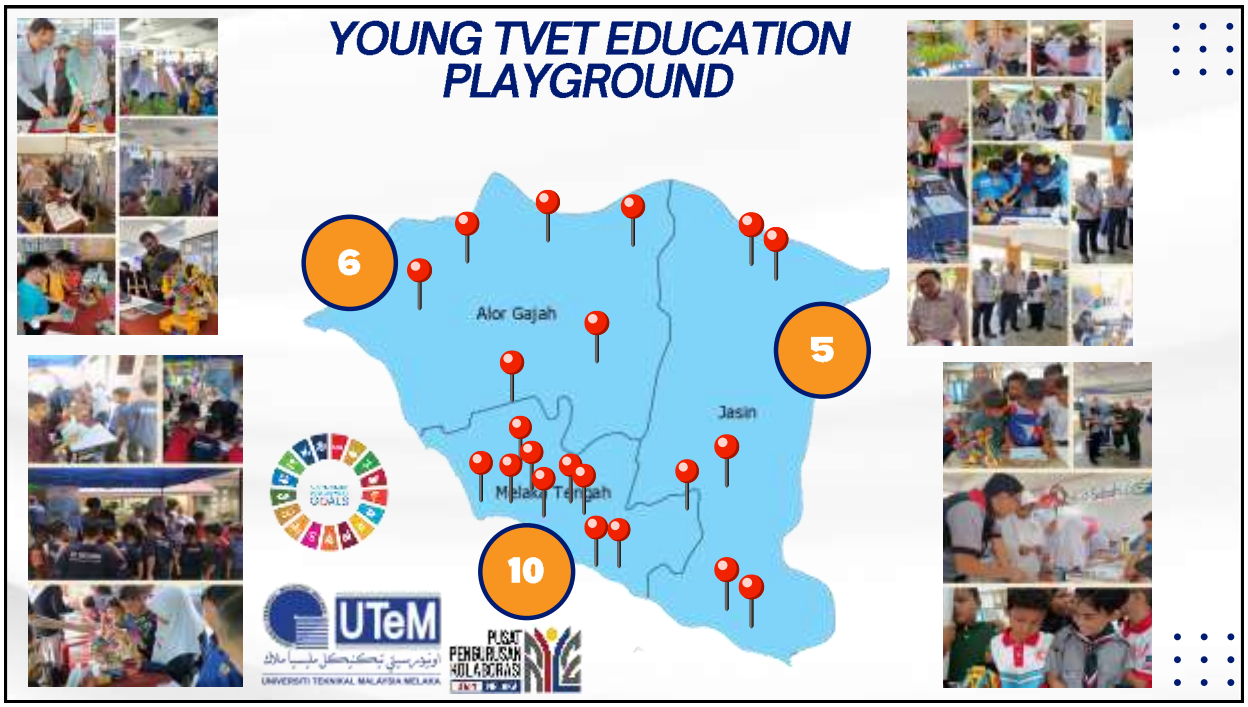
WHY?

A reflection of political, cultural, and economic perspectives to build a good image of vocational education for the 21st century (Catri, 1998).

YOUNG TVET EDUCATION PLAYGROUND

In Collaboration with:

ST2 11 LANDASAN KPT


YOUNG TVET EDUCATION PLAYGROUND
6
5
10
Alor Gajah
Jasin
Melaka Tengah
UTeM
UNIVERSITI TEKNIKAL MALAYSIA MELAKA


YOUNG TVET EDUCATION PLAYGROUND
APPLICATION OF MICRO:BIT & ARDUINO IN ROBOTICS
DR. MOHD NAZMIN MASLAN
RICE
OBJECTIVE
1.To create a creative, innovative and skillful generation.
2.To gain students' interest in Science, Technology, Engineering and Mathematics (STEM) using engaging activities related to robotics.
TECHNOLOGY
Knowledge Sharing Transfer Program (KSTP) on microcontroller technology by using line following robot and robot arm for manufacturing field.
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SELANDAR

JELAJAH YOUNG TVET EDUCATION PLAYGROUND

APPLICATION OF 3D PRINTING MANUFACTURING

MOHAMMAD RAFI OMAR
FTKM

OBJECTIVE

1.To create a creative, innovative and skillful generation.
2.To gain students' interest in Science, Technology, Engineering and Mathematics (STEM) using engaging activities related to 3D printing.

TECHNOLOGY

Knowledge Sharing Transfer Program (KSTP) on additive manufacturing technology by using 3D printing machine and pens.

In Collaboration with:

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YOUNG TVET EDUCATION PLAYGROUND

No.	Name of school	Total Reach Audience
1	SK TAMAN MERDEKA	1,054
2	SK BACHANG	960
3	SK BATU BERENDAM 2	1,280
4	SMJK KATHOLIK	638
5	SMK BUKIT KATIL	1,483
6	SMKA SHARIFAH RODZIAH	707

UTeM
UNIVERSITI TEKNIKAL MALAYSIA MELAKA

YOUNG TVET EDUCATION PLAYGROUND

No.	Name of school	Total Reach Audience
7	SK DUYONG	418
8	SMK AYER KEROH	1,194
9	SK TAMAN BUKIT RAMBAI	1,606
10	SK (P) DURIAN DAUN	203

YOUNG TVET EDUCATION PLAYGROUND

No.	Name of school	Total Reach Audience
1	SMK TUN SYED ZAHIRUDDIN	536
2	SMK SERI BEMBAN	717
3	SMK DANG ANUM	953
4	SK BUKIT SENGGEH	149
5	ILP SELANDAR BERSEMPENA KIMA KE DESA	>500

YOUNG TVET EDUCATION PLAYGROUND

No.	Name of school	Total Reach Audience
1	SMJK PULAU SEBANG	933
2	BENDANG KG. BERINGIN	26
3	SK LENDU	416
4	TABIKA KEMAS @ UCAM	10
5	SMA (JAIM) AL-ASYRAF	382
6	SMK RAHMAT	1,190

Total Reach Audience

>14k

Primary & Secondary School Students

APPLICATION OF MICRO:BIT & ARDUINO IN ROBOTICS

YOUNG TVET EDUCATION PLAYGROUND

Total Reach Audience

3k

STEM/TVET Decision Makers, University, Primary & Secondary School Students

PROGRAM SEKOLAH ANGKAT
ROAD TO MALAYSIA TECHLYMPICS 2024

DR. MOHD NAZMIN MASLAN

RICE

OBJECTIVE

1. To acquire and apply the knowledge and guidance given during the competition.
2. To transfer knowledge to teachers for planning a variety of innovation activities for students.
3. To create a creative, innovative and skillful generation.

TECHNOLOGY

Knowledge Sharing Transfer Program (KSTP) on:

1. Drone
2. Computing
3. Internet of Things (IoT)
4. Sumo Robot
5. Blueprint for the Future
6. Autonomous Guided Vehicle (AGV)
7. Creative and Animation Design
8. Micro Satelite Makerthon
9. 3D Printing and Development

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PROGRAM SEKOLAH ANGKAT
ROAD TO MALAYSIA TECHLYMPICS 2024

Total Reach Audience

1,008

Primary & Secondary School Teachers and Students

ST2 11 LANDASAN KPT

MICRO:BIT FOR SCHOOLS

INITIATIVE FROM ONSEMI GIVING NOW PROGRAM

DR. AMINAH BINTI AHMAD

FTKEK

OBJECTIVE

1.To create a creative, innovative and skillful generation.

2.To gain students' interest in Science, Technology, Engineering and Mathematics (STEM) using engaging activities related to computing for microcontrollers such as micro:bit

TECHNOLOGY

Knowledge Sharing Transfer Program (KSTP) on microcontroller technology by using micro:bit for computational skill.

In Collaboration with:

Total Reach Audience

>100

Primary School Teachers ans Students

ST2 11 LANDASAN KPT

INFINEON WEEK

DRONE FUN DAY

ARMAN HADI AZAHAR

FTKE

OBJECTIVE

1.1.To gain students' interest and increase the amount of students choosing TVET course in line with the national's TVET agenda.

2.2.To expose students to latest technology in drone and instill the interest in them.

TECHNOLOGY

Knowledge Sharing Transfer Program (KSTP) on assembling and controlling drones.

In Collaboration with:

Total Reach Audience

11

Primary & Secondary School Students

ST2 11 LANDASAN KPT

INFINEON WEEK
SOLAR CAR

TS. MOHD ZAKARIA MOHAMMAD NASIR
FTKM

OBJECTIVE

1.1.To gain students' interest and increase the amount of students choosing TVET course in line with the national's TVET agenda.
2.2.To expose students to latest technology in solar car and instill the interest in them.

TECHNOLOGY

Knowledge Sharing Transfer Program (KSTP) on assembling and controlling drones.

In Collaboration with:

Total Reach Audience
11
Primary & Secondary School Students

ST2 11 LANDASAN KPT

YOUNG TVET EDUCATION PROGRAM
F1 IN SCHOOL FOR STUDENTS AND TEACHERS OF SECONDAY SCHOOL IN MELAKA

TS. MOHD ZAKARIA MOHAMMAD NASIR
FTKM

OBJECTIVE

1.To expose students to latest technology in 3D printing using Computer Aided-Design (CAD) and instill the interest in them.
2.To gain students' interest and increase the amount of students choosing TVET course in line with the national's TVET agenda.

TECHNOLOGY

Knowledge Sharing Transfer Program (KSTP) on Formula 1 (F1) cars designs using Computer Aided-Design (CAD) and 3D printing.

In Collaboration with:

Total Reach Audience
74
Secondary School Students & Teachers

ST2 11 LANDASAN KPT

YOUNG TVET EDUCATION PROGRAM

APPLICATION OF MICRO:BIT IN PROGRAMMING

TS. DR. NOORREZAM BIN YUSOP
FTMK

OBJECTIVE

1.To create a creative, innovative and skillful generation.
2.To gain students' interest in Science, Technology, Engineering and Mathematics (STEM) using engaging activities related to programming for microcontrollers such as micro:bit

TECHNOLOGY

Knowledge Sharing Transfer Program (KSTP) on microcontroller technology by using micro:bit for programming skill.

Total Reach Audience

26

Primary School Students

In Collaboration with:

ST2 11 LANDASAN KPT

VISION

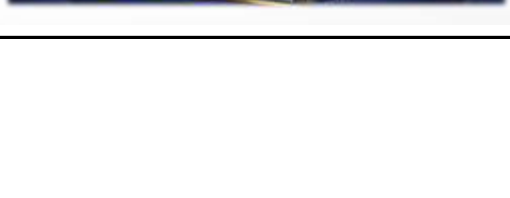
Preserving the integration of the University/RICE with industry, academics, government agencies for the sake of UTeM excellence

MISSION

Be a leader in innovation, commercialization, STEM, edu-tourism, RICE-UTeM-Melaka and industry relations in line with the University's Strategic Plan

OBJECTIVE

- Empowering the concept of the Quadruple Helix (University, Government, Industry and Community) in the Knowledge-Based Society for Innovation and Research Development in the State of Melaka. This Quadruple Helix concept indirectly helps the country achieve success in the form of a double Leap.
- Develop R&D in studies related to Policies for Economic Growth and Sustainability of the State of Melaka.
- Develop R&D for innovation and technology commercialization in line with the Melakaku Jaya 2035 Strategic Plan (PSMJ35) and the Sustainable Development Goals (SDG) in the State of Melaka.
- Promoting the value of research in the development of education for sustainable development as part of important learning in the State of Melaka.




THANK YOU
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