

# Elevate Your Research Beyond Academia

**Dr Norshidah Baharuddin**  
**Research Development Section**  
**SIRIM Industrial Research**  
**SIRIM Berhad**

**15 October 2019**



MINISTRY OF INTERNATIONAL TRADE AND INDUSTRY



**SIRIM**



# VISION

Best Partner for Innovation

# MISSION

We provide quality and sustainable innovation to:

1

## Government

Contribute towards national policies and aspiration

2

## Industry

Enhance trade access, competitiveness and business growth

3

## Society

Improve quality of life through health, safety, environment and consumer protection

# MAINTAINING THE NATIONAL TECHNICAL SERVICES & QUALITY INFRASTRUCTURE

**2108 manpower strength to provide outreach services to industries all over the Country**  
**Mandatory Technical Review of Calibration and Measurement Capabilities**



**PULAU PINANG**  
Permatang Pauh (91)



Advanced Materials Research Centre (AMREC)  
Kulim (103)



**SABAH**,  
Kota Kinabalu Industrial Park (14)



**TERENGGANU**,  
Kaw. Perindustrian Chendering (4)



**PERAK**,  
Kaw. Perindustrian Pangkalan II (6)



**Machinery Tech Centre**  
Rasa, Selangor (60)



**SIRIM BERHAD SHAH ALAM**  
(1604)



**IC-I Sensor Shah Alam, Selangor** (16)

National Metrology Institute of Malaysia, Sepang (117)



**IC-I Smart Manufacturing Bukit Jalil, Selangor** (66)



**PAHANG**,  
Kaw. Perindustrian Gebeng (10)



**SARAWAK**,  
Tmn Perindustrian Demak Laut (16)



**JOHOR**,  
Taman Teknologi Johor (41)



**MELAKA**,  
Kaw. Perindustrian Batu Berendam (7)

- SIRIM BERHAD SHAH ALAM
- 4 Off-Campus Facilities
- 3 State Offices
- 5 Regional Offices





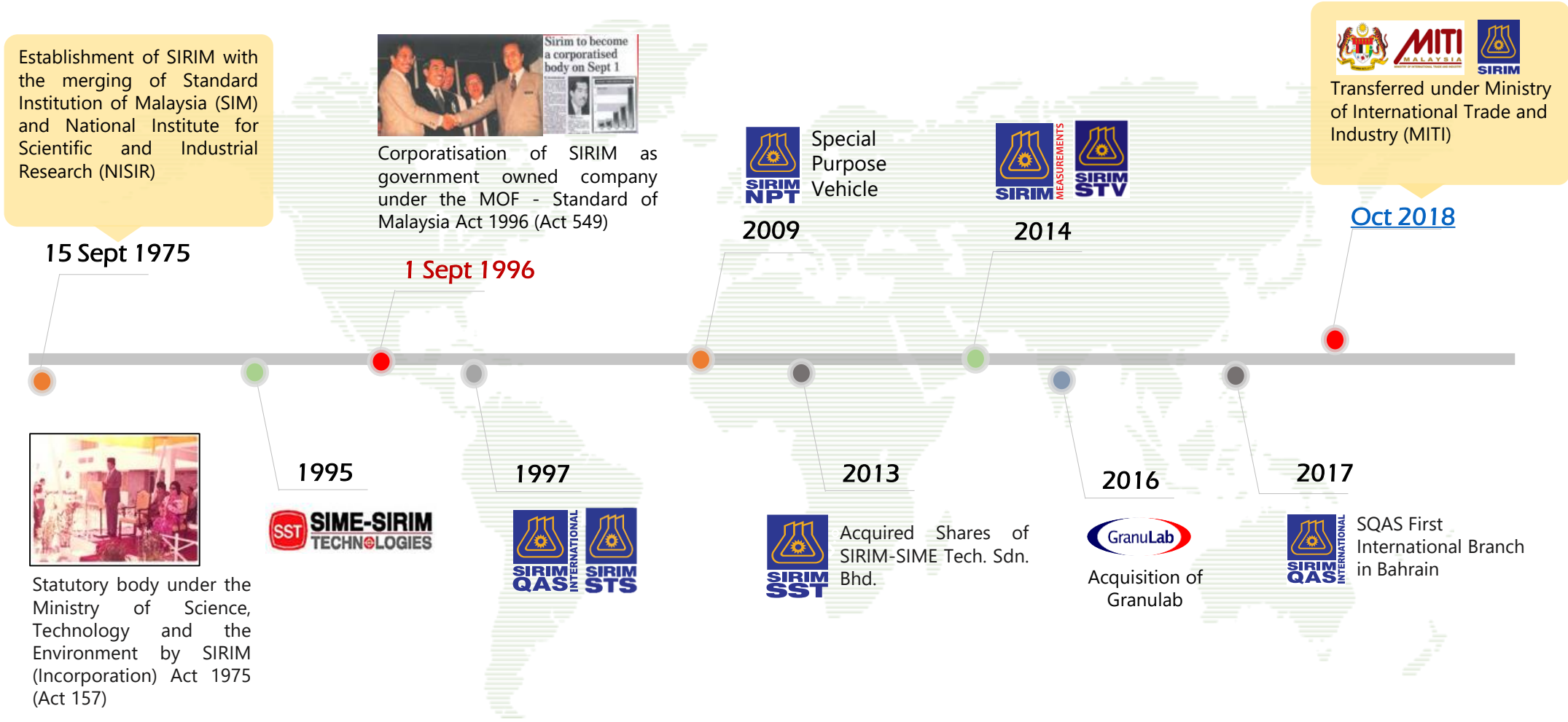
## Strategic Collaboration Through Technology Innovation



15 OCTOBER 2019 | UNIVERSITI TEKNOLOGI MALAYSIA | SIRIM BERHAD

**ACCELERATING BUSINESS COMMERCIALISATION**

# EVOLUTION OF SIRIM OVER 40 YEARS...



# SIRIM ROLES, MANDATE & ACTIVITIES



## COMMERCIAL

Standards of Malaysia Act 1996

- **SQAS** - Conformity Assessment
- **SSTS** - Standard Development Agency, Industry Standards, Training & Consulting
- **SST** - Calibration on Electrical, Mass, Temperature, Force & Dimensional
- **SMT** – RF Calibration
- **STV** - Technology Transfer & Commercialisation
- **NPT** - Special Vehicle for Bumiputera TDM industry
- **Granulab** – Medical Device Start-up
- **PSDC** - Packaging and Security Design

## SIRIM INDUSTRIAL RESEARCH (SIRIM IR)

MAJLIS REKABENTUK MALAYSIA **MRM**  
MALIS REKABENTUK MALAYSIA

## DEVELOPMENTAL

Corporatisation Agreement 1996

### SIRIM IR

- Industrial Research
- SME & Industry Development
- Product Development & Enhancement
- Process Improvement
- National Technical Service Infrastructure
- Entrepreneur Development

### MRM (*Mesy. Jemaah Menteri 14 Ogos 1993*)

- Design Advisory & Policy
- Good Design Mark
- New Product Design Development & Commercialisation



NATIONAL METROLOGY INSTITUTE OF MALAYSIA

## STATUTORY

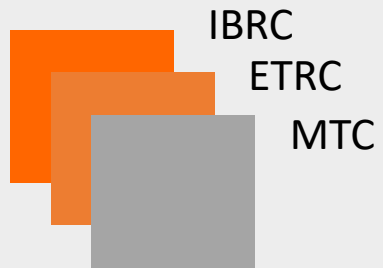
National Measurement Systems Act 2007

- International and National Measurement & Traceability Infrastructure
- Certified Reference Materials
- Legal Metrology (Weight & Measures Act)
- Industrial Metrology

# INDUSTRIAL INNOVATION AND COMMERCIALISATION

## SIRIM Industrial Research

### 3 Technology Centres



IBRC - Industrial Biotechnology Research Centre  
 ETRC - Environmental Technology Research Centre  
 MTC - Machinery Technology Centre

### Industry-Driven Platform 6 IC-Innovations (IC-I)

- Bio-NG
- Bio-Medical
- Energy Management
- Sensor
- Nanotechnology
- Smart Manufacturing

## STV

- Technology Scouting & Evaluation
- Business Linkages
- Fabrication & Testing Services
- Technology upscaling - regulatory, product specification, process dev.

### Tech Docket

- Composite Tanks (CNG, LPG)
- Cosmetic Technology
- SimbionteA
- Micro Precision Grinding

Start-up  
(Granulab)

OEM  
(LD Micro)

Licensing  
(Sireh Emas)

Joint Venture

SIRIM  
Industry Standard

Technical Services  
(Toxicity, Biocompatibility, Characterization, failure analysis)

Conformity Assessment – Testing, Inspector & Certification

Calibration & measurement

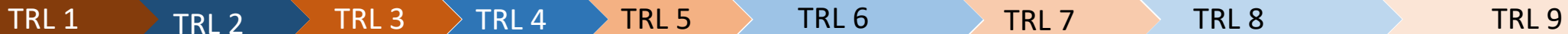
Packaging & security design



Applied R&D

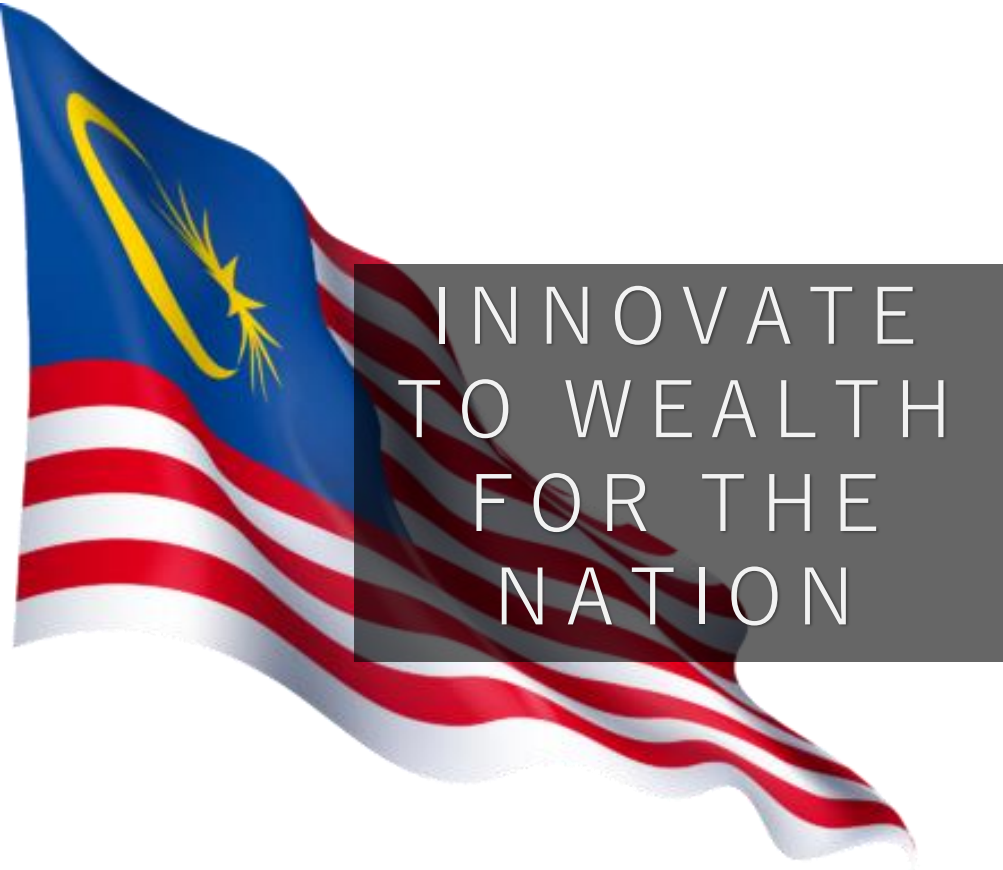
Productisation

Market Access



TRL – Technology Readiness Level

# COMMERCIALISATION FRAMEWORK



## Commercialisation Framework Our Approach

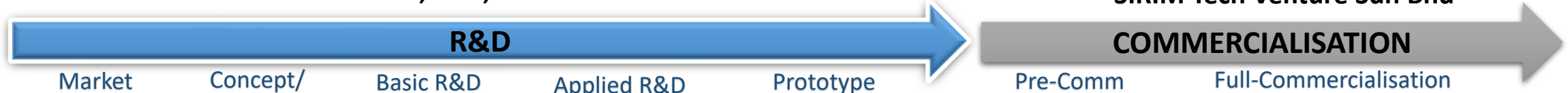




# ADD VALUE ALONG TECHNOLOGY COMMERCIALISATION

SIRIM IR, IHLs, IP owner

SIRIM Tech Venture Sdn Bhd



## TECHNOLOGY MATURITY

Technology Readiness Level	9	Commercialised
	8	Pre-production
	7	Field test
	6	Prototype
	5	Bench/Lab testing
	4	Detailed design
	3	Preliminary design
	2	Conceptual design
	1	Basic concept



## ENGINEERING REQUIREMENT

Manufacturing Readiness Level	9	Produce
	8	Pilot
	7	Skills
	6	Costs
	5	Tools
	4	Concept
	3	Technology
	2	Materials
	1	Process



## BUSINESS ATTRIBUTE

Business Readiness Factor	12	Vision
	11	Desire, Willingness and Resolve
	10	Need
	9	Business Case
	8	Funding
	7	Sponsorship and Leadership
	6	Governance
	5	Accountability
	4	A Workable Approach and Execution Model
	3	IT Capacity to Execute
	2	Departmental Capacity to Execute
	1	Ability to Implement and Operate

# TECHNOLOGY DOCKET

A Virtual Database which holds ready technology/product/process/service to be offered to the potential technology taker through any of commercialisation pathways.



# COMMERCIALISED TECHNOLOGIES



## STV komersial mesin pemotong ketepatan mikro

SIRIM Tech Venture Sdn Bhd (STV), anak syarikat Sirim Berhad, menjadi gerbang pemasaran dan jualan mesin pemotong ketepatan mikro yang akan dibangunkan LD Micro Precision Sdn Bhd (LDM).

Ini susulan perjanjian pakatan strategik yang ditandatangani antara Sirim dan LDM, sebagai langkah berterusan dalam usaha mengkomersialkan mesin tersebut ke pasaran program pendidikan.

Presiden dan Ketua Eksekutif Kumpulan Sirim, Prof Ir Dr Ahmad Fazlil Mohamad Hani berkata, kerjasama itu akan membawa hasil penyelidikan dan pembangunan serta inovasi ke dalam pasaran, selaras dengan inisiatif Tahun Pengkomersialan Malaysia.

"Ini adalah kejayaan kepada Sirim di dalam usaha pengkomersialan, di mana kami memudahkan



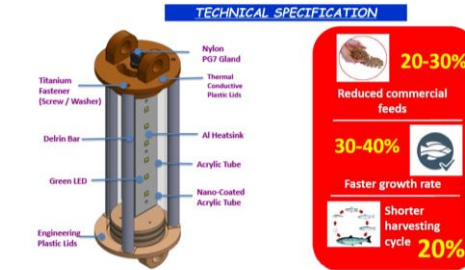
Ajmain (kiri) dan Siaw Ling bertukar-tukar dokumen perjanjian, sambil disaksikan Ahmad Fazlil (dua, kiri) dan Kean Lee.

pemindahan teknologi dengan industri yang dapat membantu mereka membina pengetahuan dalam teknologi inovatif.

"Di samping itu, usaha tersebut akan menbolehkan industri dalam bidang Latihan Teknikal dan Pendidikan Vokasional

(TVET) untuk melatih penggunaannya mengenai mesin ketepatan dan teknologinya," katanya.

Perjanjian itu ditandatangani Ahmad Fazlil dan Pengarah LDM, Lai Siaw Ling, disaksikan Ketua Pegawai Operasi STV, Ajmain Kasim dan Pengarah Urusan LDM, Tan Kean Lee.



Best Partner for Innovation



LPG Tank



## COMMERCIALISED TECHNOLOGIES



Start-up subsidiary of STV, focusing on Medical Devices.



### Synthetic bone graft

Medical device manufacturer of halal product



### Indigenous product

1<sup>st</sup> in Malaysia and ASEAN



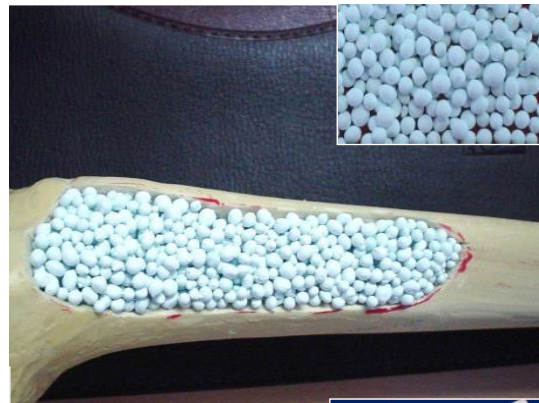
### Product registration

Under adoption scheme of KKM; certified to ISO 13485-2003; CE Mark



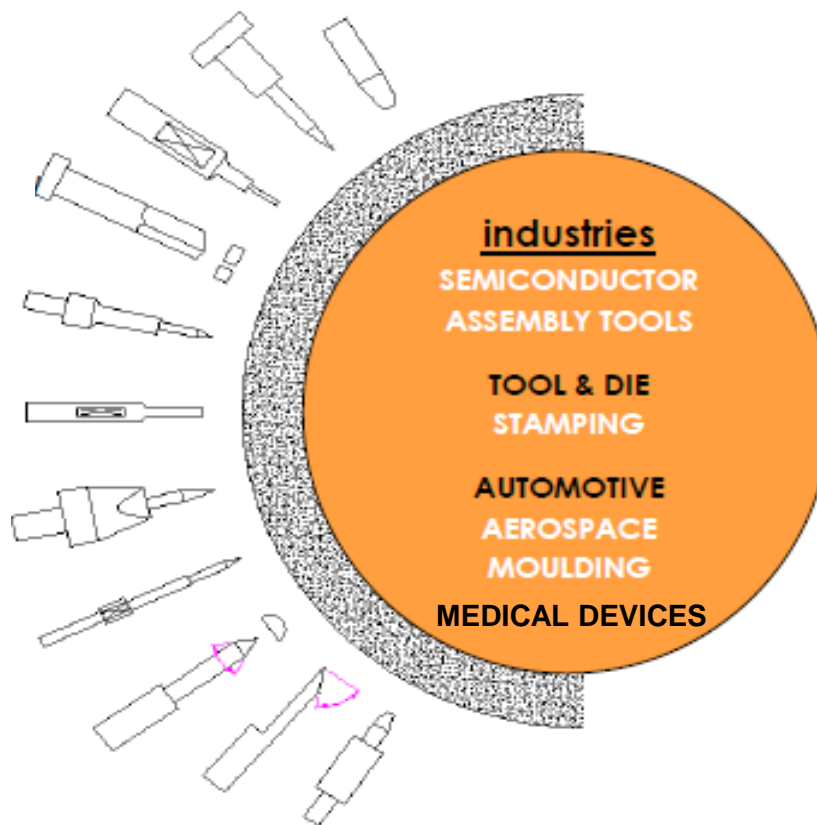
### Market penetration

Serving 26 public and 17 private hospitals



# COMMERCIALISED TECHNOLOGIES

## TARGET INDUSTRY SECTORS



## COMPLIANCE

NOSS : MC-050-3:2015-CO4  
(Micro Precision Grinding Operation)



## COMMERCIALISED TECHNOLOGIES

### UFAL – Underwater Fish Attracting LED

Upon a number of field studies conducted in open sea at Langkawi, Pulau Aman and Kuala Muda, the green LED was scientifically proved to be very effective in attracting different species of fish. Light intensity, spectrum and photoperiod in the rearing environment of marine fish larvae can be significant factor in survival and growth. Attracting plankton to the light source, in turn fishes eat the plankton.


25%

Reduced commercial feeds

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30-40%


Increased growth rate

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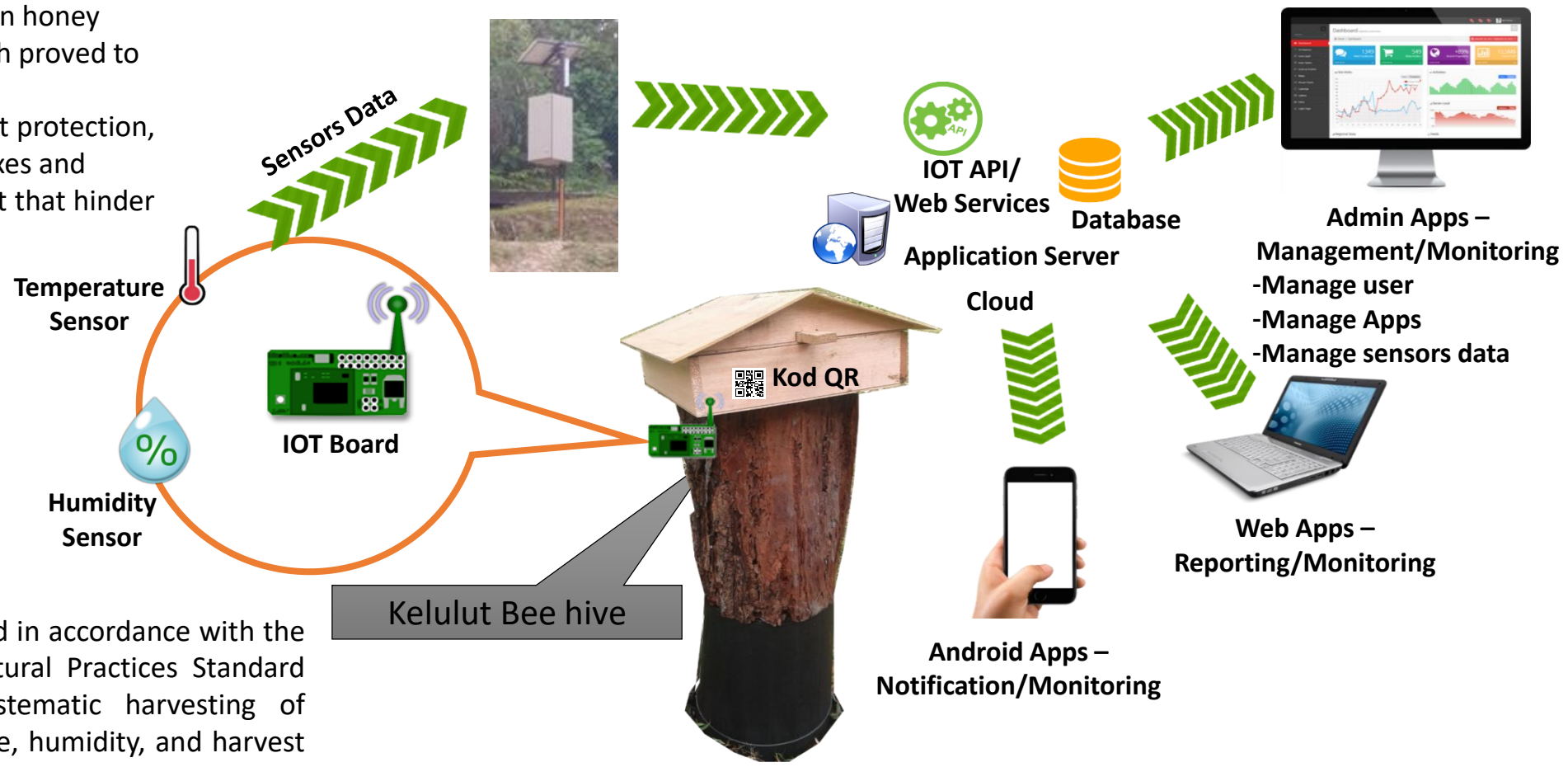
Shorter harvesting cycle

20%

# COMMERCIALISED TECHNOLOGIES

## Technical issues/Problems :

- The breeders concentrated only on honey instead of bees and propolis which proved to be more nutritious
- Colony recognition, quality habitat protection, livestock farms, design of nest boxes and appropriate harvesting equipment that hinder the productivity of Kelulut.



## Outcome :

- The system has also been developed in accordance with the requirements of the Good Agricultural Practices Standard (APB) to ensure timely and systematic harvesting of information on species, temperature, humidity, and harvest schedule to ensure high quality of honey.

## COMMERCIALISED TECHNOLOGIES



99 unit of stand alone solar powered lighting system have been successfully installed at Tasik 7, Shah Alam.

System :

- 6 meters composite pole
- 40 Ah LifePO<sub>4</sub>/100w solar PV
- 30w Aries LED



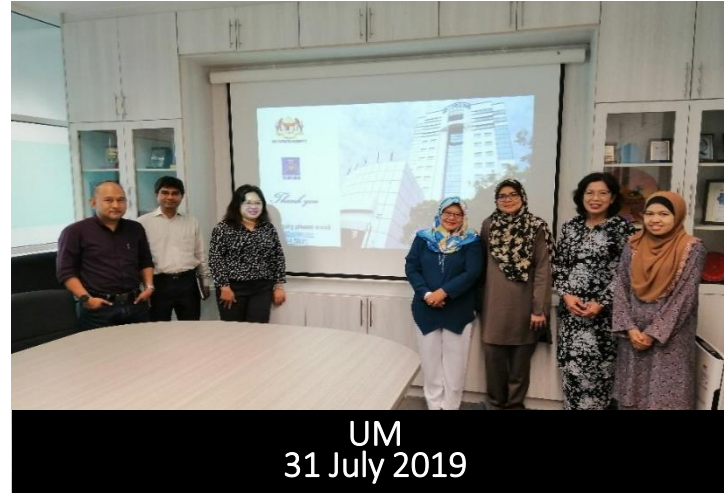


**WAY FORWARD**

# Institute Higher Learnings



UiTM  
8 July 2019



UM  
31 July 2019



UiTM - Group 1  
6 Aug 2019



UKM  
19 Aug 2019



UNIMAS  
23 Aug 2019



UTM KL  
27 Aug 2019



# Institute Higher Learnings



UPM  
6 Sept 2019



MSU  
17 Sept 2019



UTM JB  
27 Sept 2019



UniKL  
8 Oct 2019

# Government



# Industry Partners



# Industry Partners



MESTECC R&D GRANT BRIEFING SESSION  
7 Oct 2019



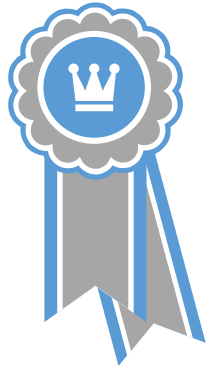
MRPMA - Factory visit  
13 Sept 2019



FRGS GRANT BRIEFING SESSION  
4 Sept 2019



# HOW CAN WE WORK TOGETHER.....?



## Business

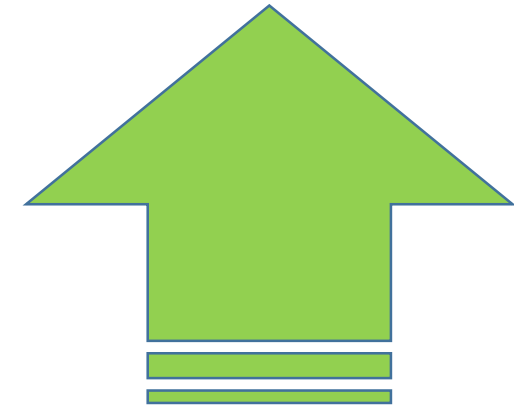
- ✓ COMMERCIALISATION WORKSHOP
- ✓ TECHNOLOGY MARKET RADAR
- ✓ MARKET STUDY



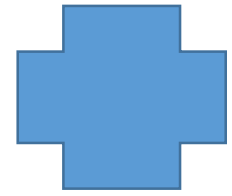
## Partnership

- ✓ MOVING UP TO HIGHER TRL
- ✓ SYNERGY OF R&D ACTIVITIES

# COMMERCIALISED TECHNOLOGIES



- NDA
- MoU
- MoA



# SELECTED TECHNOLOGIES

# Thank You

## Contact Us:

### Research Development Section

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Pn Zuraidah Baba

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Tel: 03-5544 6025

Pn Asma Basaruddin

Email: [asma@sirim.my](mailto:asma@sirim.my)

Tel: 03-5544 6034



# GRANTS UNDER RMK-11 FOR HIGH VALUE ADDED AND COMPLEX **PRODUCT DEVELOPMENT PROGRAMME (PDP)** AND **MARKET DEVELOPMENT PROGRAMME (MDP)**

NORSHIDAH BAHARUDDIN  
IRMC  
SIRIM IR



MINISTRY OF INTERNATIONAL TRADE AND INDUSTRY





# PDP vs. MDP



## PDP

A form of financial assistance to enable the development of high value-added and complex product based on EPU's list of Frontier Products

Definition

The Funding will be disbursed in the form of grants based on the needs of the projects

Funding

- i. Government Agencies
- ii. Research Institutions
- iii. IHLs / RU
- iv. COE

Eligibility Criteria

Activities that pertaining to the development of high value-added and complex product that include awareness programme, industry intelligence, research, competency development, technology acquisition, accreditation, certification and testing of high value-added & complex product with industry.

Scope

## MDP

A financial support facility to scale up and enable the industry to produce high value-added and complex product

The funding will be disbursed/reimbursed in the form of matching grants or soft loan not exceeding **RM950,000.00**

- i. Companies incorporated under the Companies Act, 1965
- ii. Companies in the manufacturing sectors with Malaysian equity ownership of at least 60%

Activities that include productivity improvement, capacity building, licensing, standards & certification compliance and promotional activities.

Purchase of new or reconditioned equipment, infrastructure upgrade, renovation & expansion and purchase of generic software and computer peripherals are eligible for soft loan facility under the MDP.

# PDP APPLICATION FORM



MINISTRY OF INTERNATIONAL TRADE AND INDUSTRY

## RMK-11: HIGH VALUE ADDED AND COMPLEX PROGRAMME

PRODUCT DEVELOPMENT PROGRAMME (PDP)  
YEAR: .....

### DOCUMENTS/INFORMATION FOR SUBMISSION

Please send us the following documents:

1. List of Industry Taker(s)
2. List of Potential Partner(s)
3. Quotation/ Pro-forma Invoice/ Invoice/ Purchase Contract/ Catalogue for items to be financed

### APPLICANT DETAILS

a. Name of RI	
b. Person in-Charge	
c. NRIC No.	
d. Designation	
e. Registered Address	
f. Tel. No.	
g. H/P No.	
h. Fax No.	
i. Email	

### PROJECT DETAILS

Title	
Project Description	
Type of Financing	Grant/ Matching Grant/ Soft Loan
Total Cost of Programme in 2018	RM (Ringgit Malaysia.....)
Expected Output on these following aspects: (Please elaborate)	a. Industry b. Development of New Technology c. Impact Towards Mass Community

### KEY ACTIVITIES

No.	Tasks	Duration of Tasks

### DELIVERABLES FOR YEAR .....

No	Activities	Deliverables

### FUNDING PROVISIONS

No.	Activities	Amount (RM)	Month of Disbursement

### PROCUREMENT OF EQUIPMENT

No.	Details (Producer/Model/Country of Origin)	Quantity	Price/unit (RM)

### DECLARATION BY APPLICANT

I/We declare and confirm that:

#### Authorization on Personal Data

I/We hereby expressly and unconditionally authorize MITI and MIDF as the Fund Manager to acquire and/or verify any personal information directly or indirectly identifiable to me/us but not limited to information on my/our identity, identification number, contact particulars, financial position, sensitive personal information and/or any other non-public information which are relevant to MIDF's businesses, with or from any credit reporting/rating bureau or agency, Bank Negara Malaysia, financial institutions and/or other entities.

I/We further authorize and agree that MIDF at its absolute discretions may obtain, use, retain, disclose, share, match, and/or transfer all or any part of the Personal Data in anyway, method and/or duration whatsoever either within and/or outside Malaysia to, from or with any of MIDF's shareholders, subsidiaries, related parties, officers, employees, agents, advisors, service providers, third parties or independent contractors, counter parties, any credit reporting/rating bureau or agency, Bank Negara Malaysia, financial institutions and/or other entities which MIDF deems necessary as follows:

- to comply with all applicable laws, rules, regulations, guidelines, other legal requirements and/to litigate, defend or respond accordingly to an actual or potential lawsuit including queries involving regulatory and non-regulatory bodies; or
- generally to protect its best interest, rights and properties and/or to ensure the technical competence and functioning of its operations and systems including but not limited to credit evaluation / rating / references, risk management, audit, debt collection, legal process and/or its financial position

in order to ensure the accuracy of the Personal Data at all times.

I / We have read, understand and hereby expressly and unconditionally agree and consent to the above contents

Name:  
NRIC No:  
Designation:  
Signature & Official Stamp  
Date:

\*kindly submit the form and supporting documents to [allrmk11hva@miti.gov.my](mailto:allrmk11hva@miti.gov.my)

# MDP APPLICATION FORM



MINISTRY OF INTERNATIONAL TRADE AND INDUSTRY

## RMK-11: HIGH VALUE ADDED AND COMPLEX PROGRAMME

### MARKET DEVELOPMENT PROGRAMME (MDP)

YEAR: .....

A. Company Name:

B. Product Name:

C. Description:

Please send us the following documents:

- List of Industry Taker(s)
- List of Potential Partner(s)
- Quotation/ Pro-forma Invoice/ Invoice/ Purchase Contract/ Catalogue for items to be financed

#### ASSISTANCE REQUIRED

##### 1. Competency Development

Item	Service Provider	Cost	Spent/Claim (only for product)	Committed	Remarks
i.	Name: Address: Contact Person: Contact Details:				
ii.					
iii.					

##### 2. Technology acquisition/software

Item	Service Provider	Cost	Spent/Claim (only for product)	Committed	Remarks
i.	Name: Address: Contact Person: Contact Details:				
ii.					
iii.					

##### 3. Accreditation/Certification/Product Testing

Item	Service Provider	Cost	Spent/Claim (only for product)	Committed	Remarks
i.	Name: Address: Contact Person: Contact Details:				
ii.					
iii.					

##### 4. Industry Intelligence

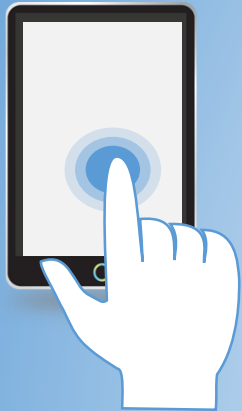
Item	Service Provider	Cost	Spent/Claim (only for product)	Committed	Remarks
i.	Name: Address: Contact Person: Contact Details:				
ii.					
iii.					

##### 5. Awareness Programme

Item	Service Provider	Cost	Spent/Claim (only for product)	Committed	Remarks
i.	Name: Address: Contact Person: Contact Details:				
ii.					
iii.					

\*kindly submit the form and supporting documents to [allrmk11hva@miti.gov.my](mailto:allrmk11hva@miti.gov.my)

# APPLICATION FOR 2018



**MITI** is currently looking for interested applicants to **apply for RMK-11 HVA fund for MDP & PDP**

For more information and application forms, kindly click the following links:



[RMK-11 HVA application guidelines](#)



[PDP application forms](#)



[MDP application forms](#)

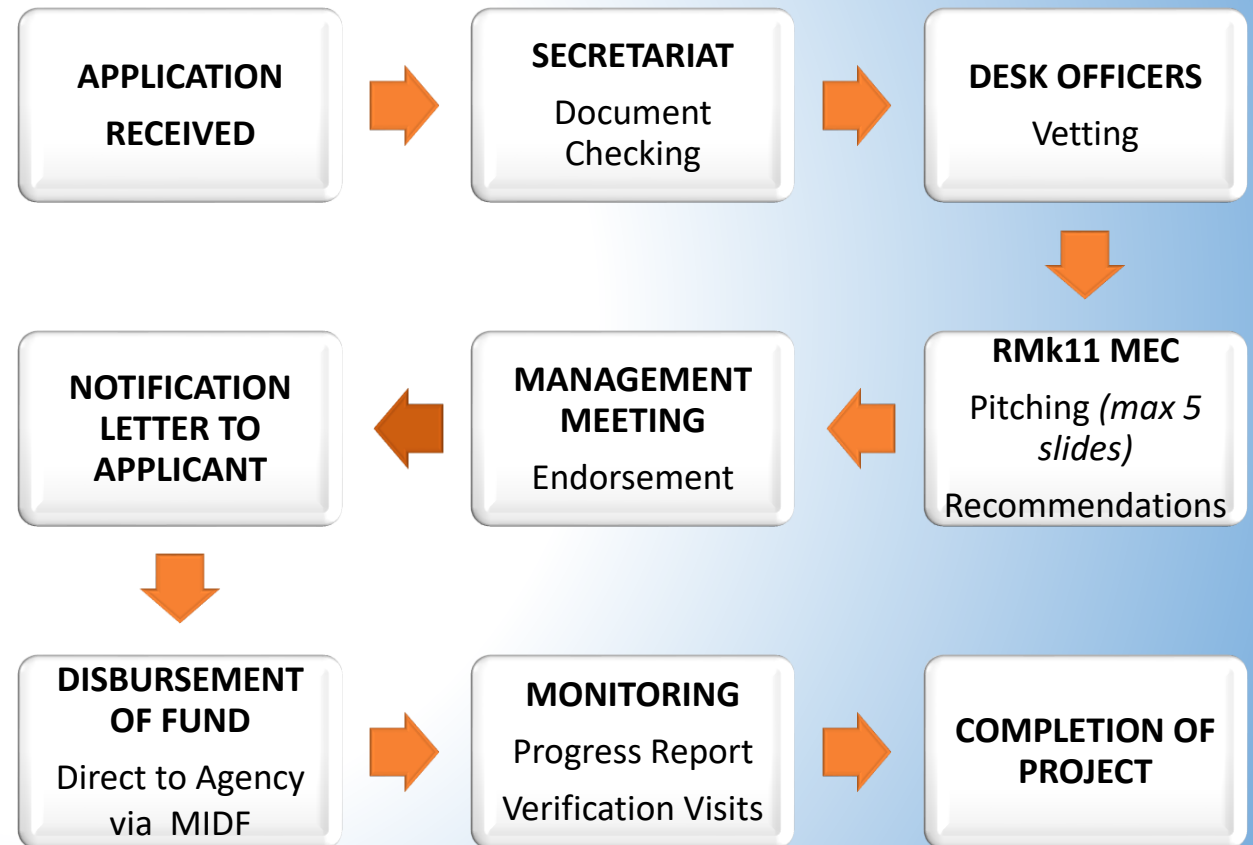


[Annex 1 Frontier Product List](#)



<http://www.miti.gov.my/index.php/pages/view/4761>

## PROCESS WORK FLOW



\*kindly submit the form and supporting documents to [allrmk11hva@miti.gov.my](mailto:allrmk11hva@miti.gov.my)

# PITCHING PROCESS



Each presentation will be allotted 20 minutes and the Secretariat will stop the presentation at the 5<sup>th</sup> slide. The **proposal (max. 5 slides)** will consist of these following items:

- Slide 0**          Project title and agencies involved
- Slide 1**          Project Brief
- Slide 2**          Study KPI and Objective
- Slide 3**          Commercialization Plan/ Status
- Slide 4**          Project Timeline
- Slide 5**          Details of Cost Estimate

*Thank you*

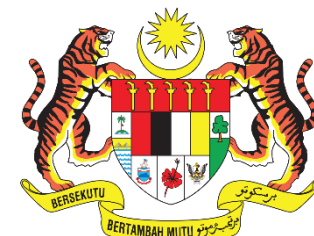
shidah@sirim.my

T: 03-5544 5831



# MESTECC R&D FUND GUIDELINE

NORSHIDAH BAHARUDDIN  
IRMC  
SIRIM IR



KEMENTERIAN TENAGA, SAINS, TEKNOLOGI,  
ALAM SEKITAR DAN PERUBAHAN IKLIM  
MINISTRY OF ENERGY, SCIENCE, TECHNOLOGY, ENVIRONMENT, & CLIMATE CHANGE





# DEFINITION / OBJECTIVES / QUANTUM & DURATION / PRIORITY AREAS

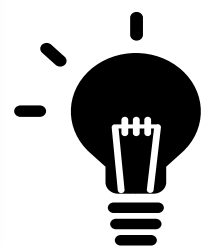


## DEFINITION

- To carry out projects for economic growth and societal benefit.
- Must be at POC level
- It must be well-designed, scientifically valid, and competitive with current technologies and research works.
- The project output shall be new products, processes or systems by which value can be created for customers, businesses and society.

## OBJECTIVES

-  To undertake experimental development towards commercialization by reducing valley of death; and
-  To stimulate the growth and increase capability and capacity from cross collaboration between Industry, GRI & IHL.



**QUANTUM : 3 miL**

**DURATION: 24 months**



## PRIORITY AREAS

- Water, Food, and Energy Nexus
- Green Growth for Sustainable Development
- Medical and Healthcare



# ELIGIBLE APPLICANT / DEFINITION SME / PROCESS FLOW/ PRIORITY AREAS



## WHO CAN APPLY

SME

In collaboration with

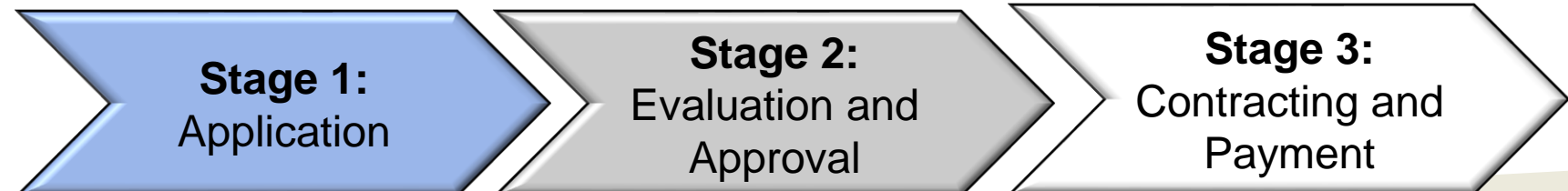
GRI

Government STI

IHL

CATEGORY	SMALL	MEDIUM
<b>Manufacturing</b>	<ul style="list-style-type: none"> <li>Sales turnover from RM300k to &lt; RM15 mil; or</li> <li>Employees from 5 to &lt; 75</li> </ul>	<ul style="list-style-type: none"> <li>Sales turnover from RM15 mil to &lt; RM50 mil; or</li> <li>Employees from 75 to &lt; 200</li> </ul>
<b>Services and Others Sectors</b>	<ul style="list-style-type: none"> <li>Sales turnover from RM300k to &lt; RM3 mil</li> <li>Employees from 5 to &lt; 30</li> </ul>	<ul style="list-style-type: none"> <li>Sales turnover from RM3 mil to RM20 mil</li> <li>Employees from 30 to &lt; 75</li> </ul>

## APPLICATION PROCESS



# ELIGIBILITY CRITERIA



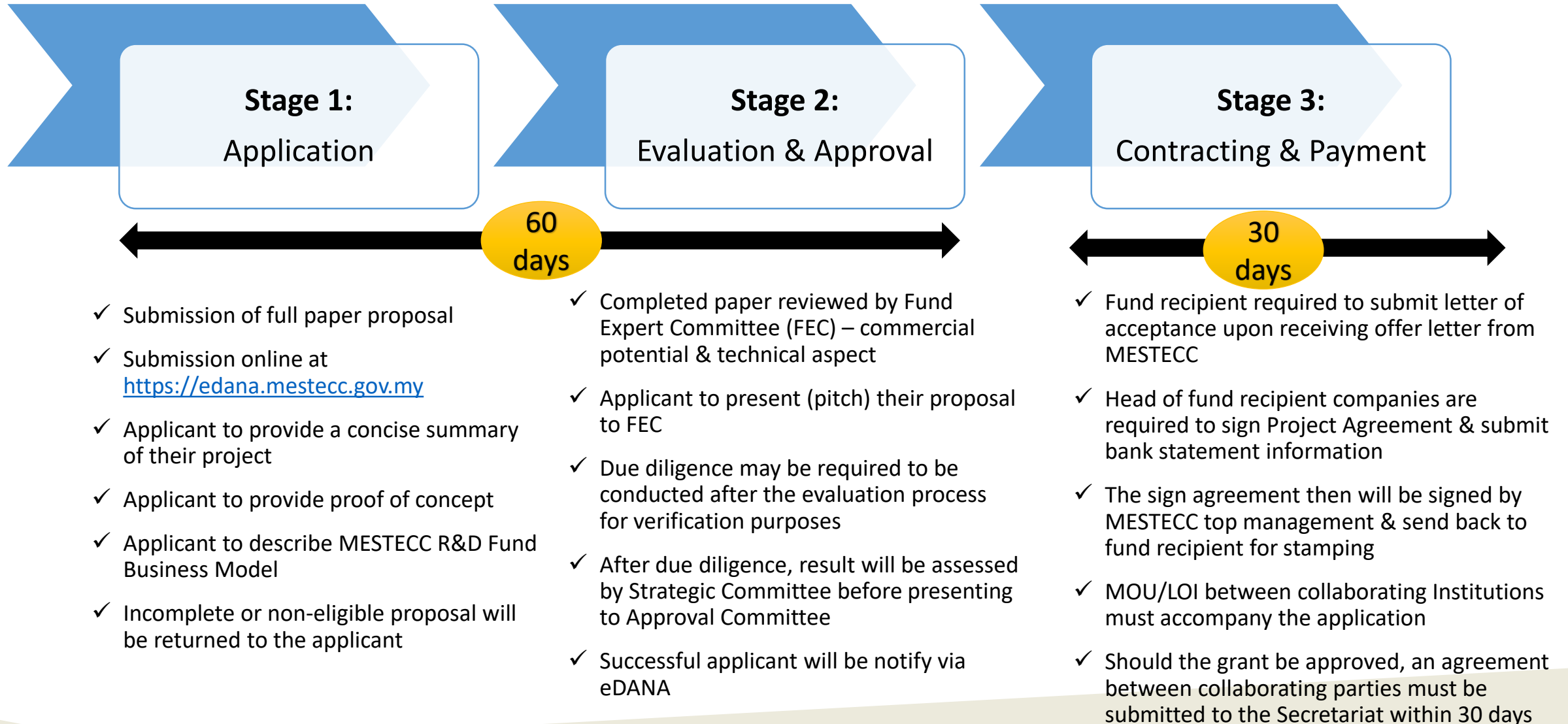
- Must have a minimum of **51% equity held by Malaysians.**
- Must be in **operation for at least 2 years.**
- None of the **company directors or project team members** have been convicted of any fraudulent activities or the company has been declared bankrupt, under liquidation or placed under receivership.
- Only **Malaysian citizen can apply and lead the project** but can include international organizations or expatriates as part of their project team.

- Researchers working under contract with SME, GRIs, STI and IHLs must ensure that their employment **contract is still valid during the project duration.**
- The project team should consist of members who are **qualified and competent** on the technical aspects of the whole project.
- Applicants are allowed to **lead only one project at any time.**
- Projects must be **conducted in Malaysia.**
- The proposed project must **contain elements of technological innovation leading to commercialization.**

## SCOPE OF FUNDING

1. **Pilot plant / prototype**
2. **Pre-clinical testing / clinical testing / field trials/ stress test / user acceptance test**
3. Intellectual Properties (IP)
4. Market testing and evaluation
5. Regulatory and standards compliance
6. Special services
7. Administration
8. **Raw materials / consumables directly related to the project**
9. Technology / IP Acquisition

# APPLICATION PROCESS





#### **INTELLECTUAL PROPERTY RIGHT:**

- ICF encouraged to be patented & registered for IP rights
- IP rights wholly owned by the recipient

#### **INCENTIVE FOR INTELLECTUAL PROPERTIES:**

- Incentive for disclosure of project Intellectual Property : RM 500
- Incentive for filing of patent of project Intellectual Property : RM 5,000
- Incentive for granting of patent of project Intellectual Property : RM 10,000
- Grant recipient to disclose to MESTECC in writing, the existence of Project Intellectual Property not later than 60 days from project completion

#### **OWNERSHIP & USE OF R&D EQUIPMENT:**

- R&D equipment purchased must be recorded & tagged with project number
- The equipment belong to fund recipient
- Maintenance of equipment is under fund recipient once the project completed
- Equipment are not for sole use of fund recipient
- Made available to other research organisations as and when need arises
- Equipment shall not be sold and transferred within 2 years after project completed

Thank you

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