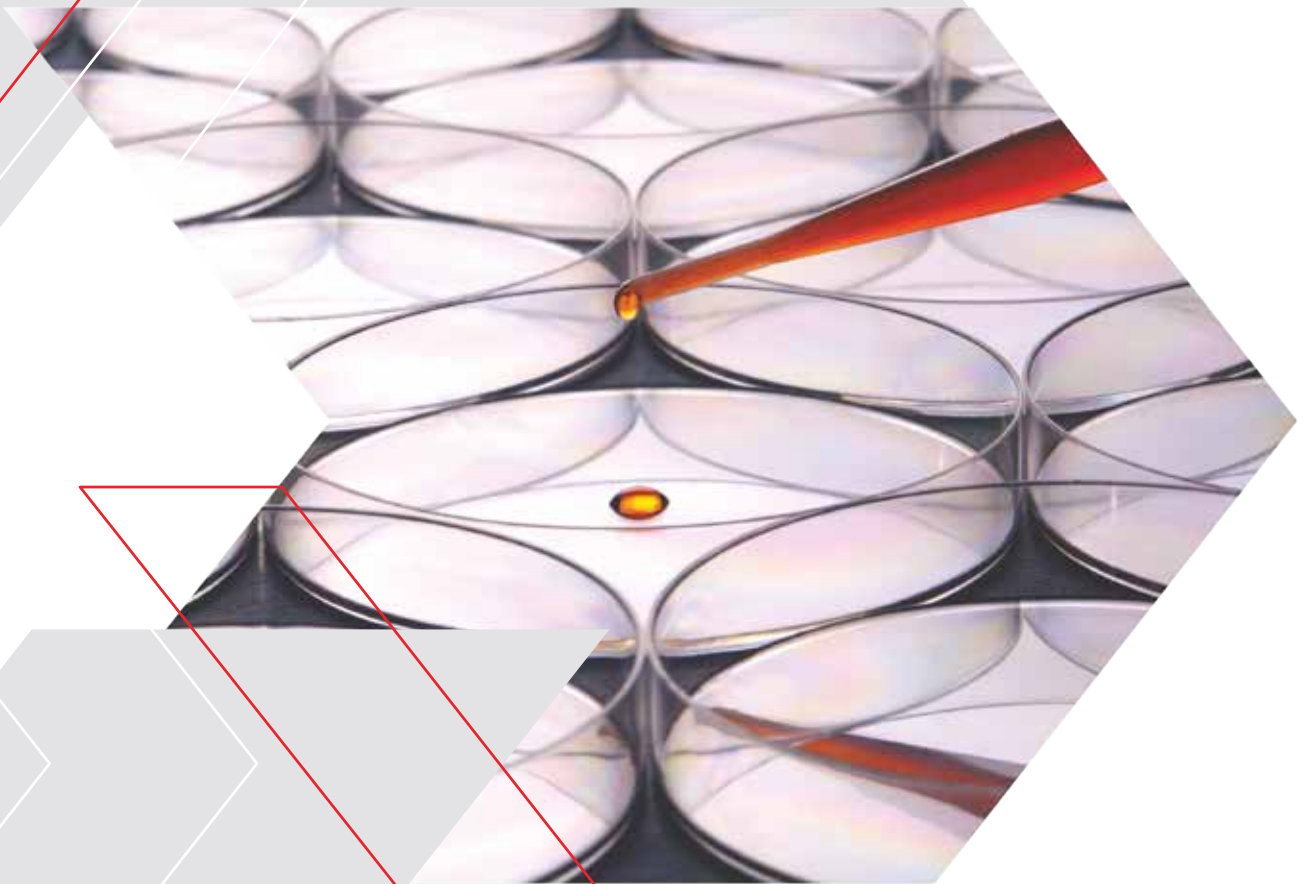


RESEARCH AND DEVELOPMENT (R&D) SERVICES





Introduction

This booklet is one of a series of 20 booklets prepared by MIDA for the purpose of providing investors with relevant information on establishing projects in the identified services sub-sectors in Malaysia. The complete list of booklets is as follows:

- Booklet 1:** General Policies, Facilities and Guidelines
- Booklet 2:** Regional Operations
- Booklet 3:** Research and Development (R&D) Services
- Booklet 4:** Logistics Services
- Booklet 5:** Specialised Technical Support Services
- Booklet 6:** Information and Communication Technology Services
- Booklet 7:** Environmental Management Services
- Booklet 8:** Distributive Trade Services
- Booklet 9:** Tourism and Travel Related Services
- Booklet 10:** Education and Industrial Training Services
- Booklet 11:** Legal Services
- Booklet 12:** Accounting, Auditing and Taxation Services
- Booklet 13:** Architectural Consultancy Services
- Booklet 14:** Surveying Consultancy Services
- Booklet 15:** Medical and Health Care Services
- Booklet 16:** Engineering and Energy Consultancy Services
- Booklet 17:** Management Consultancy Services
- Booklet 18:** Market Research Services
- Booklet 19:** Advertising Services
- Booklet 20:** Quick Reference

The Ministry of International Trade & Industry (MITI) spearheads the development of industrial activities to further enhance Malaysia's economic growth. As an agency under MITI, the Malaysian Investment Development Authority (MIDA) is in charge of the promotion and coordination of industrial development in the country.

MIDA is the first point of contact for investors who intend to set up projects in manufacturing and services sector in Malaysia. With its headquarters in Malaysia's capital city of Kuala Lumpur, MIDA has established a global network of 20 overseas offices covering North America, Europe and the Asia Pacific to assist investors interested in establishing manufacturing projects and services activities in Malaysia. Within Malaysia, MIDA has 12 branch offices in the various states to facilitate investors in the implementation and operation of their projects.

If you wish to explore investment opportunities in Malaysia, please contact MIDA for more information as well as assistance in your decision-making (please see the last page of contact details of MIDA's headquarters and state and overseas offices).

RESEARCH AND DEVELOPMENT (R&D) SERVICES

BOOKLET

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RESEARCH AND DEVELOPMENT (R&D) SERVICES

Malaysia offers a wide range of incentives and financial assistance to attract investments in R&D activities.

R&D includes R&D Company, R&D Contract Company and In-House R&D and R&D Status Company.

The Promotion of Investments Act, 1986 defines research and development (R&D) as “any systematic or intensive study carried out in the field of science or technology with the objective of using the results of the study for the production or improvement of materials, devices, products, produce or processes but does not include:

- quality control of products or routine testing of materials, devices, products or produce;
- research in the social sciences or humanities;
- routine data collection;
- efficiency surveys or management studies; and
- market research or sales promotion.

1. LICENSING AND REGISTRATION

1.1 Registration with Companies Commission of Malaysia

The setting up of R&D services requires the intended party to register with the Companies Commissions of Malaysia (CCM) under the Registration of Businesses Act, 1956 or incorporate a company under the Companies Act, 2016. A foreign company cannot carry on business in Malaysia unless it incorporates a local company, or registers the company with CCM in Malaysia. For a foreign company to register a company in Malaysia, the same registration procedures pertaining to the registration of a locally incorporated company apply.

A ‘Foreign Company’ is defined under the Companies Act, 2016 as:

- a company, corporation, society, association or other body incorporated outside Malaysia,
or

- an unincorporated society, association, or other body which under the law of its place of origin may sue or be sued, or hold property in the name of the secretary or other officer of the body or association duly appointed for that purpose and which does not have its head office or principal place of business in Malaysia.

The registration of foreign companies is considered as a 'branch office' and is done in accordance with the provisions of the Companies Act, 2016.

1.2 Business Licence

Companies intending to set up an office are required to obtain a business premise/ signboard licence from the respective local authorities, depending on the nature of the business activity.

There are 154 local authorities in Malaysia which are responsible for approving business premise and signboard licences. The requirements for obtaining a business premise/signboard licence may vary according to the conditions requirements set by each local authority.

Applicants are advised to contact the relevant local authority (based on the location of the business premises) regarding the specific rules and regulations pertaining to business premise/signboard registration. The fees may vary according to each of the local authorities.

Contact details for local authorities are available in the Quick Reference Booklet in this series.

2. EQUITY POLICY

R&D companies and contract R&D companies including design houses granted incentives under the Promotion of Investments Act, 1986 are allowed 100% foreign equity ownership.

3. GENERAL AGREEMENT ON TRADE IN SERVICES (GATS), ASEAN FRAMEWORK AGREEMENT ON SERVICES (AFAS) AND FREE TRADE AGREEMENTS (FTAS)

The updates and information on Schedule of Specific Commitments of GATS, AFAS and FTAs is available in MITI's website www.miti.gov.my

4. SPECIFIC IMMIGRATION PROCEDURES

4.1 Expatriate Employment

Companies applying for incentives under the Promotion of Investments Act, 1986 can apply for expatriate posts, namely Key Posts and Time Posts. Applications should be submitted to MIDA. Upon approval, companies should forward their applications for Employment Passes to the Immigration Department for endorsement.

5. FINANCIAL ASSISTANCE

R&D activity is eligible to be considered for financial assistance provided by the Government through the following government bodies:

5.1 Ministry of Energy, Science, Technology, Environment & Climate Change (MESTECC)

Research & Development Fund (MESTECC R&D Fund)

The MESTECC is the government's initiatives which is open to businesses and researchers interested in obtaining fund to carry out projects for economic growth and societal benefit.

Proposed projects must be at least at Proof of Concept (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.

- The aim of the MESTECC R&D Fund are:
 - to undertake experimental development towards commercialisation by reducing valley of death; and
 - to stimulate the growth and increase capability and capacity from cross collaboration between Industry, Malaysian Government Research Institutes (GRI) and Institutions of Higher Learning (IHL).
- **Priority Areas**
 - A) The proposed projects must be within the framework of the priority areas as follows and the details as stated in Appendix 1:
 - Water, Food, and Energy Nexus;
 - Green Growth for Sustainable Development;
 - Medical and Healthcare;
 - B) Project proposal related to enforcement of security and defence (police and military) will not be funded under this scheme.

- **Eligible Applicant**

- The fund is open to Small and Medium Companies in collaboration with
 - A) Government Research Institutes (GRI), Government Science, Technology and Innovation Organisation (Government STI organisation) and Public and Private Institutes of Higher Learning (IHL).
 - B) Small and Medium Companies refer to companies registered with the following bodies:
 - Companies Commission of Malaysia (SSM) either under Registration of Company Act (1965) or Limited Liability Partnerships (LLP) Act 2012; or
 - Respective authorities or district offices in Sabah and Sarawak; or
 - Respective statutory bodies for professional service providers.

- C) Government STI organisation is a government organisation involved in R&D activities and other services related to STI in Malaysia.
- Definition of small and medium companies is as shown in Table 1.
 - Proposals must include collaboration between SME and GRI/Government STI Organisation/IHL.

Table 1: Definition of Small and Medium Companies by Size of Operation

| Category | Small Companies | Medium Companies |
|----------------------------|---|--|
| Manufacturing | <ul style="list-style-type: none"> • Sales turnover from RM300,000 to less than RM15 mil; or • Employees from 5 to less than 75 | <ul style="list-style-type: none"> • Sales turnover from RM15 mil to not exceeding RM50 mil; or • Employees from 75 to not exceeding 200 |
| Services and Other Sectors | <ul style="list-style-type: none"> • Sales turnover from RM300,000 to less than RM3 mil; or • Employees from 5 to less than 30 | <ul style="list-style-type: none"> • Sales turnover from RM3 mil to not exceeding RM20 mil ; or • Employees from 30 to not exceeding 75 |

Source: SME Corporation Malaysia

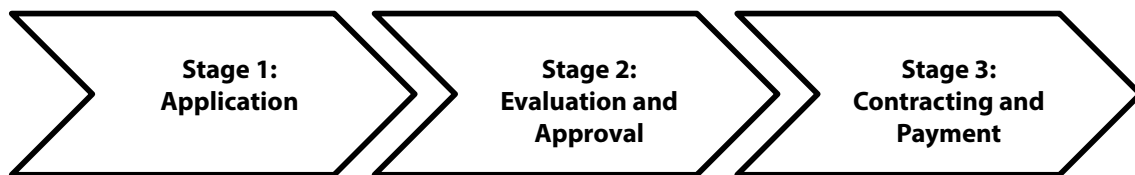
5.1.1 Eligibility Criteria

- All categories of companies must have a minimum of 51% equity held by Malaysians.
- Companies must be in operation for at least 2 years from date of application. Companies shall provide audited financial report as proof. Start-up Company can be considered on case by case basis.
- 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 citizens can apply and lead the project but can include international organisations or expatriates working in any of the organisations mentioned above 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. Each team member must provide a curriculum vitae clearly stating their previous research and highlighting their experience and achievements.
- Applicants are allowed to lead only one project at any time.
- Projects must be conducted in Malaysia.
- The proposed project must contain elements of Experimental Development leading to commercialisation.

- The following are not eligible for funding under the MESTECC R&D Fund:
 - Works already undertaken or under the responsibility/portfolio of certain Ministries, Departments or Agencies other than MESTECC;
 - Application from Research Institutes that have their own internal research funding such as CESS Fund; and
 - Applicant had received MESTECC fund and breached the project agreement.

5.1.2 Application Process

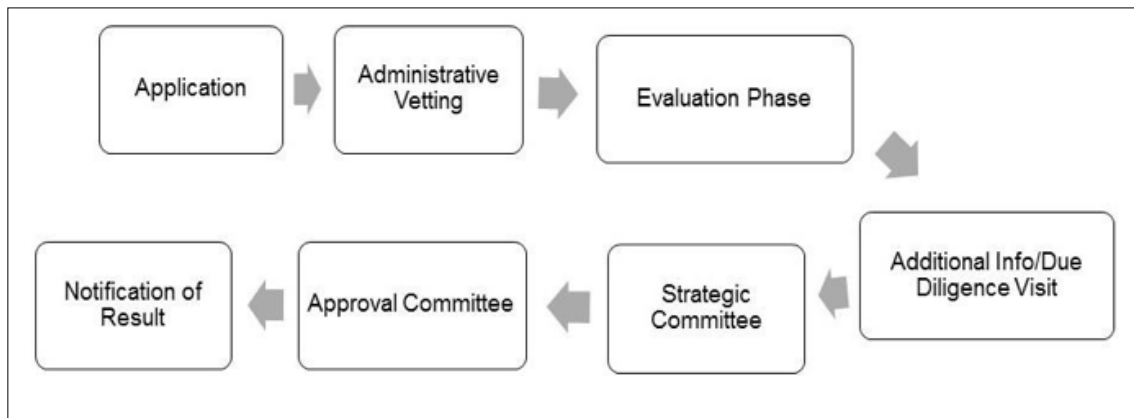
There are three (3) stages to the MESTECC R&D Fund application as shown below:



- a) Stage 1: Application process are as follows:
- The application starts with submission of the full paper proposal.
 - Full proposal must be submitted through the online system at <https://edana.mestecc.gov.my>. Applicants and collaborators must provide document as listed in Appendix 2.
 - In the online application, applicant needs to provide a concise summary of their project which shall answer the following questions:
 - i) What are the problems you are solving?
 - ii) How to solve the problem?
 - iii) Who will benefit from your solution?
 - iv) What are the anticipated outcomes?
 - v) What are the potential impacts?
 - In the application form, applicant needs to provide proof of concept as the evidence that verifies the concept/theories/ideas that can be applied successfully in the real-world operation.
 - The applicants also need to describe the MESTECC R&D Fund Business Model in the application form as listed in Appendix 3.
 - The proposal submitted will then be vetted by the Secretariat to ascertain whether the application and documents submitted fulfil the basic requirement. Incomplete or non-eligible proposal will be returned to the applicant.
- b) Stage 2: Evaluation process is as follows:
- The complete paper will be reviewed by the Fund Expert Committee (FEC) for elements of their commercial potential and technical aspect.

- Applicants will be invited to present (pitch) their full paper proposal to the FEC. The applicant may be required to amend or revise the full paper to improve the proposal. In some instances, a due diligence may be required to be conducted after the evaluation process for verification purposes.
- Once the due diligence has been carried out, results will be assessed by the Strategic Committee before presenting to the Approval Committee.
- All applicants shall be notified officially via eDANA system or email. The successful applicants shall accept or decline the offer via eDANA system or email. Decisions made by the Approval Committee is FINAL and any appeal on the results will not be entertained.
- The overall application and evaluation process including notification of the results will take 60 days after all responses and information have been received from the applicant. The application process work flow is shown in Figure 3.

Figure 1: Application process work flow



c) Stage 3: Contracting and Payment Process are as follows:

- Fund recipients are required to submit letter of acceptance upon receiving the offer letter from MESTECC. Heads of the fund recipient companies are required to sign the Project Agreement and submit bank information (companies are required to open a designated bank account solely for the purpose of the project) to MESTECC.
- The signed agreement will then be signed by MESTECC's top management and the agreement will be sent back to the fund recipient for stamping.
- Activity 6.4.1 and 6.4.2 are expected to be completed within 30 days. Once the Secretariat has received the stamped agreement, the first payment to the fund recipient will be processed.
- Memorandum of Understanding/ Letter of Intent between collaborating Institutions must accompany the application. However, should the grant be approved, an agreement between the collaborating parties stating the respective scope of work, ownership of IP and all equipment purchased during the tenure of the project must be submitted to the Secretariat within 30 days from the date of the offer letter, failing which MESTECC has the right to revoke the approval.

5.1.3 Quantum And Duration Of Funding

- MESTECC would co-fund the project based on merits of each application, not exceeding the quantum on RM3,000,000.00. Quantum contribution by the applicant is subject to MESTECC's approval.
- MESTECC will fund at maximum 90% of total project cost.
- Successful application will be funded for maximum project duration of 24 months.

5.1.4 Scope Of Funding

The scope of funding for MESTECC R&D Fund are as stated in the Table 2:

Table 2: Scope of Funding for MESTECC R&D Fund

| SCOPE | FUNDED BY MESTECC | FUNDED BY APPLICANT/ ENTITY | NOTES |
|--|---|---|--|
| Pilot plant/ prototype | Equipment and supporting infrastructure directly related to the pilot plant or up-scaling prototype Engineering and design activities (man-hour) Rental/ Minor repair of equipment | Capital asset such as land, building, vehicle and furniture Rental of space, land, building Lab apparatus Equipment maintenance Personal computer, laptop, printer, scanners, toner, etc. | Not more than 40% of fund approved funding by MESTECC |
| Pre-clinical testing/ clinical testing/ field trials/ stress test/ user acceptance test | Screening test Sample testing Payment for volunteers/subjects Data analysis (man-hour) - 20% from total approved amount | Overhead cost (bills, travel, transport) Rental of facility | |
| Intellectual Properties (IP) | For registration in Malaysia only, inclusive of drafting services IP resulting from the project i) Patent ii) Industrial Design IP Incentive | Maintenance Patent Cooperation Treaty (PCT) | |

| SCOPE | FUNDED BY MESTECC | FUNDED BY APPLICANT/ ENTITY | NOTES |
|---|--|--|--|
| Market testing and evaluation | Market Sample Development Cost Data analysis (man-hour) Market validation cost up to RM15,000 Payment for enumerators (charge/sample) | Incentive for respondents Facility rental and exhibition fee | Not more than 10% of fund approved funding by MESTECC Sample size should follow the statistical standard |
| Regulatory and standards compliance | Registration of certification Standard compliance (local/international) Product testing for certification GMP, HALAL & HACCP | Training | |
| Special Services | Consultancy (agreement / letter of intent must be submitted together with the project proposal, details of the consultancy to be stated) Consultant for market testing and evaluation | Production outsourcing Travelling and transportation Organizing meeting Subscription to journals Conference fee | Not more than 20% of total fund approved funding by MESTECC Companies applying budget for special service (Consultant for market testing and evaluation) are not eligible to apply for budget under market testing and evaluation scope |
| Raw materials/ consumables directly related to the project | Raw material Consumable | Product and packaging design Brochure Advertisement Web design and development Product launching Stationery such as paper, books, etc | Not more than 20% of total fund approved funding by MESTECC |

| SCOPE | FUNDED BY MESTECC | FUNDED BY APPLICANT/ ENTITY | NOTES |
|-----------------------------------|--|--|---|
| Administration | One registered Research Officer (RO) only | Management fees Allowance/bonus for management and technical staff Office rental Utilities such as telephone, broadband, water and electricity bill | Maximum RM2,500 per month inclusive of wages, allowances and SOCSO / EPF For IHL/ GRI collaborator only |
| Technology/ IP Acquisition | Local and foreign Must be further enhanced Must provide acquisition agreement / details of the technology & IP acquired Training related to technology transfer conducted locally | | Not more than 50% of total fund approved funding by MESTECC |

Companies are allowed to bare expenditure of their collaborator for items as stated in Table 3:

Table 3: Eligible Scope of Funding for Collaborator

| SCOPE | NOTES |
|--|---|
| Pilot Plant/ Equipment Rental/ Minor repair of equipment | Up to 20% of fund approved funding by MESTECC |
| Pre-clinical testing/ clinical testing/ field trials/ stress test/ user acceptance test Sample Testing | |
| Raw materials/ consumables directly related to the project | |

5.1.5 Evaluation Criteria

The criteria used for the evaluation right from the beginning will consider the following aspects as in Figure 2.

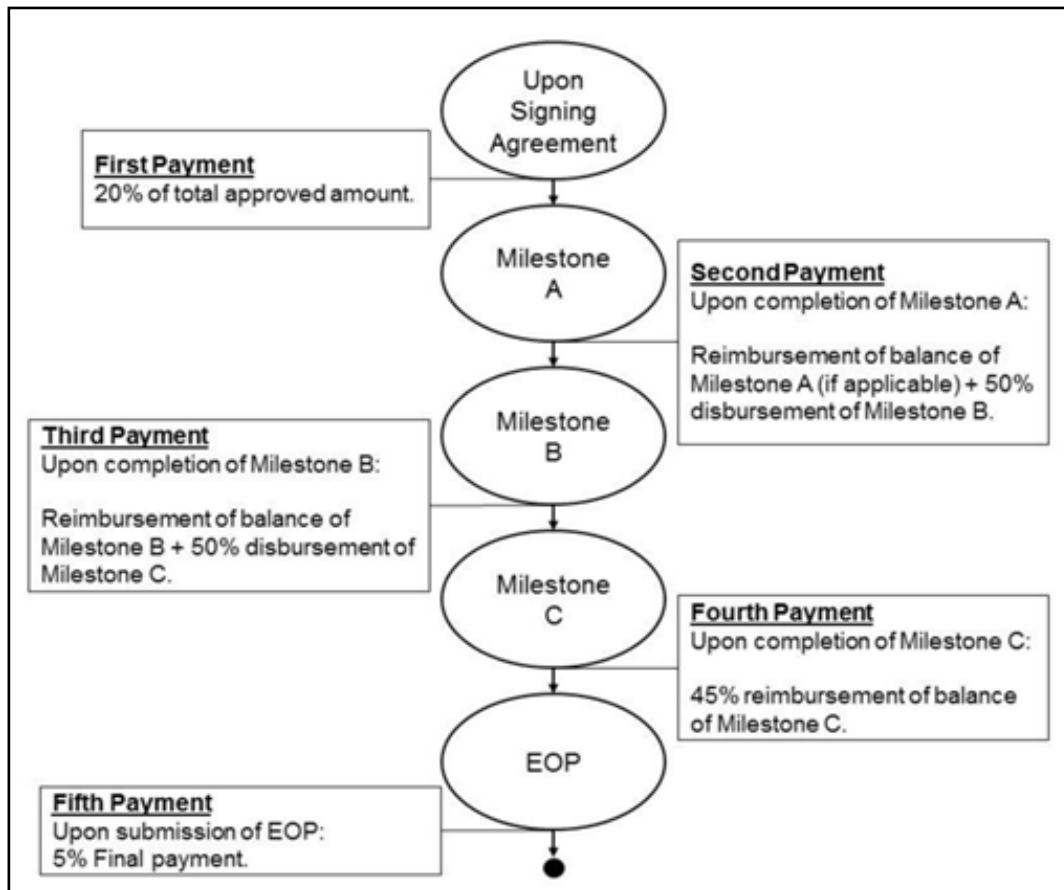
Figure 2: MESTECC R&D Fund's Evaluation Criteria

| | | | | |
|---|---|--|---|--|
| Commercial i. Competitive advantages ii. Market potential and demand iii. Appropriateness of time to market iv. Sustainability v. Diffusion vi. Cost Effectiveness vii. Marketing Strategy / Business Model viii. Standard and Certification (if applicable) | | Technical i. Proof of concept ii. Uniqueness / Innovativeness / Inventiveness of technology iii. Viability of project objectives & Appropriateness of methodology iv. Scalable Potential/Manufacturability v. Regulatory and Standard compliance | | |
| Social Impact i. Affordability ii. Creation of Skill Employment and Knowledge Worker iii. Problem Solving iv. Improvement of safety v. Conducive work and living environment | Economic Impact i. Cost reduction ii. Optimum consumption of resources iii. Export potential iv. Increasing productivity and quality of product/services | Environmental Impact i. Ecological/Carb on Footprint ii. Circular Economy iii. Compliance with environment quality act iv. Optimise usage of resources | Financial i. Potential to generate return on investment ii. Value for money iii. Financial Sustainability | Management i. Professional qualification / Experience of project leader & Team Member ii. Relevancy of key milestones iii. Risk Management |

5.1.6 Payment

- The payment mode of approved application will be based on following mechanism as shown in Figure 3.
- The initial payment will be paid after signing of agreement. Subsequent payment will be based on Schedule B of project agreement.
- The due diligence will be carried out after the achievement of the first milestone to evaluate the viability of the project.
- The Government has the absolute discretion for the review of the grant approval or the aggregate amount to be paid to the project.

Figure 3: Payment Mode of Approved Application



5.1.7 PROJECT MONITORING

- The fund recipient is required to submit periodic reports based on milestone (technical and audited financial reports) and documents as specified in the MESTECC R&D Fund Agreement. If the project shows non-compliance to the agreement and non-adherence to timelines, MESTECC reserves the right to suspend or withdraw the funding.
- The monitoring activities shall include site visits and meetings to assess progress of the project.
- Payment will be made based on satisfactory performance of appropriate milestones in accordance with the terms and conditions as set out in the project agreement.
- Project shall not begin until the project agreement has been signed by both parties and document stamped. Cost incurred for all activities prior to signing of the agreement is not claimable and not considered as part of project costs.
- End of Project Report (EOP) and audited financial report shall be submitted within three (3) months after project completion. All output of the project must acknowledge MESTECC's contribution as a fund provider. The End of Project Report shall have the following information:
 - Deliverables and direct outputs of the project;
 - Achievement of the original project objectives;
 - Commercialisation/ technology transfer plan;

- Benefits of the project;
- National impacts of the project; and
- List of equipment/facilities purchased.
- MESTECC reserves the right to request for periodic information on the progress or to invite for seminar presentation and exhibition or to conduct site visits even after the project has been completed.
- All variation is subjected to MESTECC's approval. The fund recipient needs to **submit an application in to MESTECC for approval before the variations are made.**

5.1.8 Ownership And Use Of R&D Equipment

- All R&D equipment purchased under the grant must be recorded and tagged with the project number for monitoring and verification purposes. The equipment belongs to the fund recipient and the maintenance of the equipment is under the responsibility of the fund recipient once the project has been completed. However, such equipment are not for the sole use of the fund recipient, and must be made available to other research organisations as and when the need arises.
- Equipment purchased using MESTECC R&D Fund shall not be sold and transferred within 2 years after project completed.

5.1.9 Intellectual Property Rights

- The end products developed under the MESTECC R&D Fund are **encouraged to be registered under Intellectual Property laws and Regulations (if necessary).**
- The IP rights of the project shall be wholly owned by the recipient as specified in the MESTECC R&D Fund Agreement.
- All Intellectual Property derived under MESTECC R&D Fund may be transferred to other party/parties if the project has been completed and all ownership of Intellectual Property has been granted to the recipient, subject to prior approval from MESTECC.
- Any provisional activities using the output of the project should acknowledge MESTECC as the fund provider.

5.1.10 INCENTIVE FOR INTELLECTUAL PROPERTIES

- The applicant may apply for the following incentives after the project completion, provided the allocation for the incentive is stated during grant application:
 - Incentive for **disclosure** of the Project Intellectual Property: **RM500.00;**
 - Incentive for **filing** of patent of the Project Intellectual Property: **RM5,000.00;** and
 - Incentive for **granting** of patent Project Intellectual Property: **RM10,000.00.**

Payment of this incentive shall be on a one-off basis.

- The organisation shall set aside and pay:
 - The incentive for disclosure of the Project Intellectual Property upon disclosure of the Project Intellectual Property;
 - The incentive for filing of patent of the Project Intellectual Property upon receipt of the proof of patent filing of the Project Intellectual Property; and
 - The incentive for granting of patent Project Intellectual Property upon receipt of the proof of patent granted of the Project Intellectual Property.
- The grant recipient must disclose to MESTECC in writing, of the existence of the Project Intellectual Property not later than 60 days from the Project Completion Date.

5.1.11 Termination

- MESTECC reserves the right to withdraw the grant in the event of the following:
 - Any false information provided by the recipient.
 - Changes in scope of the project without the prior written consent of MESTECC;
 - Change of project leader without the prior written consent of MESTECC;
 - Any misuse of grants;
 - Achievement / progress are not as specified in the Agreement of the Fund; and
 - Any breach of the agreement.
- Upon termination by MESTECC, recipients are required to pay back the amount of fund that has been disbursed.
- MESTECC reserves the right, at any time, to review, suspend or withdraw approval of any grant or payment if such measures are deemed necessary; and
- MESTECC reserves the right to make a claim against the recipient for any losses incurred as a result of any default by the recipient as specified in the agreement.

5.1.12 Expenditure Statements And Unexpended Grant

- MESTECC reserves the right to request the grant recipient to submit a statement of expenditure at any time during the course of a grant, or to provide supplementary information in support of an interim or final expenditure statement.
- The fund recipient must return the unexpended grant (disbursement mode) to MESTECC within three (3) months after the completion of the project. For terminated projects, fund recipient shall return the amount disbursed to MESTECC within one (1) month from date of termination notice.

5.1.13 Malaysian Code of Responsible Conduct In Research

Everyone involved in the project shall comply with the principles and practices as stated in the Malaysian Code of Responsible Conduct in Research.

5.5.14 Ethical Approval, Institutional Biosafety Committee (Ibc) Approval/ Notification And Compliance To Other Related Regulations

- Project Leader must obtain and furnish a copy of **approval from** relevant authorities when necessary.
- For a project which requires **tests on human beings or animals**, the Project Leader must obtain and furnish a copy of **ethical clearance**.
- For a project involving **living modified organisms (LMOs)**, the Project Leader must obtain and furnish a copy of **clearance by the appropriate/relevant Institutional Biosafety Committee** and also a submission of notification or submission of application for approval to the National Biosafety Board.
- Information on the use of biological resources and associated traditional knowledge must also be furnished by filling in the form as in **Appendix 4**.

Appendix 1 : MESTECC R&D Fund's Priority Areas

| Priority Area | Examples of Thematic Areas | Gaps |
|----------------------------------|--|---|
| Water, Food & Energy (WFE) Nexus | Food Supply, Security and Traceability | <p>Develop and enhance local food production, healthy alternatives, food traceability through smart, new and cross cutting technology - utilising robotics, sensors, real-time data systems.</p> <p>Create and advance knowledge/technologies that foster more efficient, safe, and secure use of resources within the food-energy-water nexus.</p> <p>Develop/Innovate tools to achieve the Sustainable Development Goals' target and to manage local resources.</p> |

| | | |
|--|--|---|
| Green Growth for Sustainable Development | <p>Construction Material Usage and Waste Management</p> <p>New Technology Commercialisation in Agriculture</p> <p>Waste Management</p> | <p>Moving towards a circular economy solutions which aims to eradicate waste generation - developing a low carbon, resource efficient, sustainable and competitive economy. Reduction of the use of virgin materials, number of items going to the landfills, environmental risk, gas emission and pollution.</p> <p>Supports the development of green industries and technologies which utilises fewer resources and generates fewer emissions during production of food, transport, construction, housing, energy, lighting, etc.</p> |
| Medical and Healthcare | <p>Increase of Obesity Rate (related to hypertension and diabetes)</p> <p>Increase of Senior Citizen</p> | <p>Develop affordable assistive technologies and early detection devices.</p> <p>Improve healthcare technologies application by developing future therapies, frontiers of physical intervention and optimising treatment.</p> <p>Restoring function and/or enabling independence for older people, the disabled and those with long-term conditions through the application of engineering, ICT and physical sciences.</p> <p>Effective technologies for individuals to manage their own healthcare.</p> |

5.1.15 Introduction

The International Collaboration Fund (ICF) is a grant provided by the Government for international joint R&D projects between researchers from Malaysia and other countries. The aim of the fund is to provide a platform for investment in expanding and enhancing research capacity, and increasing collaborative R&D partnership for competitive R&D projects that are innovative, give high impact and can subsequently contribute to the advancement of knowledge and technology development leading to commercialisation.

In encouraging international collaboration on a higher level, we hope to increase

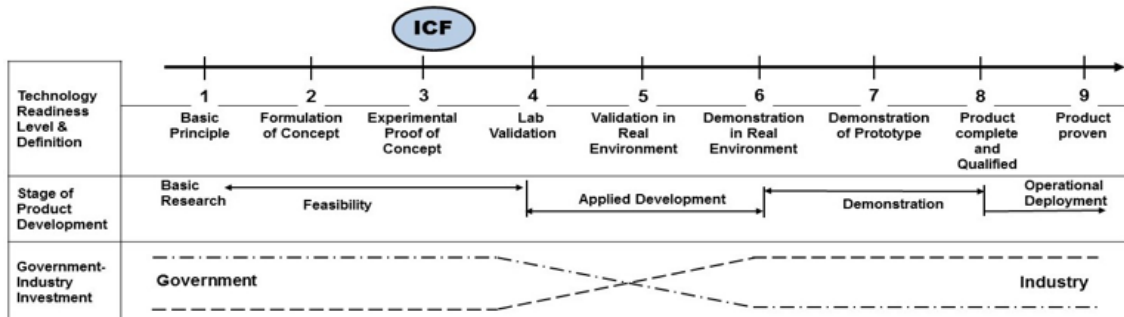
Malaysia's international competitiveness through research findings which are able to lead to new technologies while strengthening national research capacity and capability.

- Objective

The objective of this fund is to encourage and promote co-operation in science, technology and innovation through joint research and development activities for mutual benefit. This fund is intended to assist applicant to pursue analytical validation and proof of concept on Technology Readiness Level (TRL) 3.

- Technology Readiness Level
Technology Readiness Levels is a method of characterising technological maturity from the most basic research (TRL 1) through to full-scale-real-world operation (TRL 9). The International Collaboration Fund covers TRL3 as shown in Figure 1.

Figure 1: Scope of International Collaboration Fund Relative to Technology Readiness Level



- Research Areas
The proposed project must be within the framework of the research areas as follows:
 - * Biotechnology
 - * Engineering and Technology
 - * Computer Sciences and Information and Communication Technology (ICT)
 - * Medical and Health Sciences
 - * Agriculture and Forestry

The different areas under the divisions are listed in Appendix 1.

20.1 Key enablers such as, Internet of Things (IoT), Nanotechnology and Industry 4.0 should be embedded in the areas selected.

5.1.16 Eligibility Criteria

- This fund is open to all researchers, scientists and engineers who are employed on a permanent or contractual basis from the following organisations in Malaysia:
 - Government Research Institutions (GRIs);
 - Government Science, Technology and Innovation (STI) Agencies; and
 - Public and Private Institutions of Higher Learning (IHL) with accredited research programmes.
- Government STI organisation is a government organisation involved in R&D activities and other services related to STI in Malaysia.

- Researchers can lead only one (1) project at any time and main location of the project must be in Malaysia.
- Researchers working under contract with IHLs, GRIs and STI organisation must ensure that their employment contract is still valid for the project duration.
- Proposal may be required to obtain approval from relevant authorities for matters related to National safety, security and other sensitive issues.
- Branch Institutions in Malaysia cannot collaborate with the main or branch institutions elsewhere. Collaboration must be with institutions other than their own.
- International Collaborator's organisation shall equivalent to applicant organisation as follows:
 - A) Government Research Institutions (GRIs);
 - B) Government Science, Technology and Innovation (STI) Agencies; and
 - C) Public and Private Institutions of Higher Learning (IHL) with accredited research programmes.
- International Collaborator Information

The following information shall be included in the application form:

 - A) Name of researcher;
 - B) Organisation;
 - C) Country;
 - D) Passport number;
 - E) Curriculum Vitae (CV);
 - F) Title of project;
 - G) Allocation amount;
 - H) Duration of project;
 - I) Memorandum of Understanding (MoU) (except for Agencies/Departments under MESTECC); and
 - J) Letter of Acceptance between Applicant and Collaborator detailing respective scope of work.
- Local Collaborator Information

The following information shall be included in the application form:

 - A) Name of researcher;
 - B) Organisation;
 - C) Curriculum Vitae (CV);
 - D) Memorandum of Understanding (MoU); and
 - D) Letter of Acceptance between Applicant and Collaborator detailing respective scope of work.

5.1.17 Responsibility Of The Project Leader

The successful implementation of the project is the responsibility of the project leader. Project leaders have to ensure that the projects are carried out effectively to meet the specified objectives and milestones within the timeframe and funding allocated.

5.1.18 Duration And Quantum

- The project **duration** is for a maximum of **24 months**.
- **Quantum** of funding is a maximum of **RM500,000.00**. Based on approval, the first allocation will be disbursed upon stamping of agreement. Subsequent payment will be disbursed based on progress and expenditure of first allocation that has been spent.

5.1.19 Scope Of Funding

- ICF covers research leading to laboratory proof of concept, towards the development of new technologies, processes or products. This fund covers the following expenses such as wages, travelling, rentals, materials, modification, services and equipment. Detail scope of funding as described in item 8.4. ICF does not allow **cross border of funding**.
- Expenses related to overseas trips for conference including registration fee will be funded not more than RM15,000.00.
- Expenses related to work carried out at the international counterpart laboratory will be funded up to a maximum of RM20,000.00. The eligible expenses are as shown in Table 1 according to the latest circular. Please refer to "Pekeliling Perbendaharaan Kadar Dan Syarat Tuntutan Elaun, Kemudahan Dan Bayaran Kepada Pegawai Perkhidmatan Awam Kerana Menjalankan Tugas Rasmi"

Table 1: Detail on the expenses related to overseas trip

| Overseas Trip | Present paper | Lab Work |
|-------------------------------|-----------------------------------|---------------------------|
| Eligible Person | 1 Project leader or co-researcher | |
| Duration | Not more than 1 weeks | Not more than 2 weeks |
| Frequency | Once during project duration | |
| Ceiling Cost V21000+V29000 | Not more than RM15,000.00 | Not more than RM20,000.00 |

- The funding can be utilised for the following categories:
 - * **V11000: Wages and Allowances for Temporary and Contract Personnel**
 - Includes wages and allowances for a maximum of two (2) local temporary/contract personnel who is directly engaged in the project.
 - The maximum wages/allowances for a temporary/contract personnel is up to RM2,500 per month/per head inclusive of deductions for SOCSO/EPF. The allocation cannot be used for tuition fees.

* **V21000: Travel and Transportation**

- Includes travel and transportation expenses for domestic and overseas trips directly related to the project.
- Travel is limited to economy class using the shortest direct routes by either MAS or Air Asia except under extenuating circumstances.
- The allocation for travelling overseas must be budgeted for in the research proposal.
- Overseas trips must meet the following criteria:

A) Lab work

Where domestic facilities and expertise are inadequate locally, the team leader or member (not research students) can conduct a portion of the research at their counterpart's laboratory overseas. However, the venue must be suitable in terms of facilities, expertise and technology transfer. This must be indicated in the application form and the budget must include air fare, accommodation, food and transportation.

B) Lab work detail and activities must be made early the project.

The project leader or co-researcher is only allowed to go once for the duration of the project.

The project leader needs to get approval from MESTECC in writing and submit detail of lab work plan.

C) Conferences/seminars

- For oral presentation of papers only at conferences/seminars on the findings of the project but every effort must be made early on to protect any IP that may be derived from the project.

- The project leader or co-researcher is only allowed to go once for the duration of the project.

- The progress of project must be more than 50% before applying to attend the conference and within original project timeline.

- The project leader needs to get approval from MESTECC in writing and submit a copy of the acceptance letter from the organiser, abstract of the paper and detail of expenses required.

- The project leader must also submit a copy of the full paper presented after the conference.

* **V24000: Rentals**

Rental for space, equipment, transportation and any other items directly related to the project can be included.

* **V26000: Research Materials and Supplies**

Expenses supported are for research materials and supplies directly related to the project. Please provide details of items required in terms of quantity and cost. The grant will not support payments for utilities (including broadband), books, stationeries and subscription to journals etc.

* **V28000: Minor Modifications and Repairs**

- (i) Only expenses for minor modifications and repairs of laboratory, equipment or any other items directly related to the project can be included.
- (ii) The maintenance costs of existing equipment used during the duration of project period can also be included.
- (iii) The cost of maintenance of any equipment purchased will not be borne by the ICF after the project is completed.

* **V29000: Special Services**

All services under this category must be itemized and is only for services directly related to the project as follows:

- (iv) Payment for enumerators
- (v) Honorarium for subjects and experts
- (vi) Sample testing and analysis
- (vii) Data processing
- (viii) Patent registration in Malaysia, excluding maintenance cost
- (ix) IP incentives for patent and industrial design only
- (x) Fees related to paper publication of the project
- (xi) Registration fee for conference

* **V35000: R&D Equipment and Accessories**

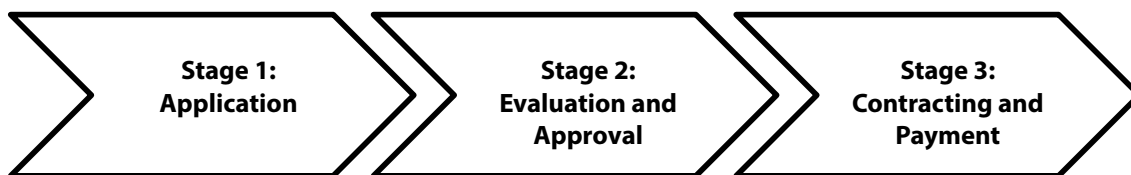
- Justification for purchase of specialised equipment must be given. Project leader will need to provide information on the availability of such equipment and why it cannot be used or shared.
- Accessories are items that are necessary to upgrade the capability of existing equipment directly related to the project.
- Purchasing of equipment must be made in the first year.
- Researchers are encouraged to share R&D equipment and avoid purchasing of the same R&D equipment within the same research institutions.
- Funding for specialised equipment and accessories cannot be more than 40% of the total project expenses. Applicants need to provide an itemized list along with the justifications, specifications, quotations and estimated costs for such purchases.
- Purchasing of personal computers, data logging, workstation, laptops, printers, servers, hosting, toners and scanners are not allowed.

• **Non-Qualifying Project Activities**

Scientific and technical information services such as collecting, coding, recording, classifying, disseminating, translating, analysing, evaluating, bibliographic services, scientific and technical information extension advisory services and compilation of data are excluded from the main activities of the project except when they form an integral part of the project. In such a case, applicants must provide a statement indicating the research objectives to which the data would contribute.

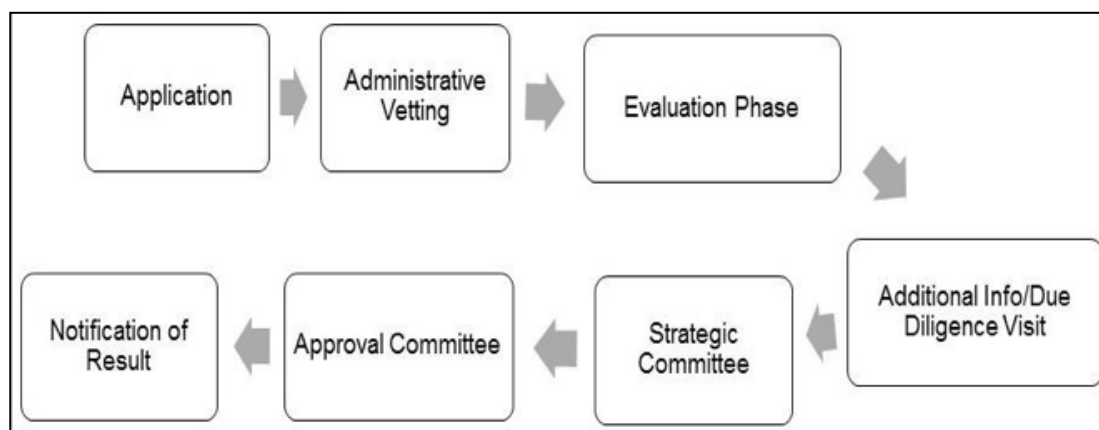
5.1.20 Application Process

- There are three (3) stages to the International Collaboration Fund application as shown below:



- Stage 1: Application process are as follows:
 - The application starts with submission of the full paper proposal.
 - Full proposal must be submitted through the online system at <https://edana.mestec.gov.my>. Applicants and collaborators must provide document as listed in Appendix 2.
 - All applications must be reviewed and approved by the Head of the applicant's organisation or the Research Management Centre (RMC) of the institution. They should also declare that the proposed research has not been funded or submitted for funding to any other source. Failure to do so would cause the application to be rejected.
 - The proposal submitted will then be vetted by the Secretariat to ascertain whether the application and documents submitted fulfil the basic requirement. Incomplete or non-eligible proposal will be returned to the applicant.
- Stage 2: Evaluation process is as follows:
 - The complete paper will be reviewed by the Fund Expert Committee (FEC) for elements of their commercial potential and technical aspect.
 - Applicants will be invited to present (pitch) their full paper proposal to the FEC. The applicant may be required to amend or revise the full paper to improve the proposal. In some instances, a due diligence may be required to be conducted after the evaluation process for verification purposes.
 - Once the due diligence has been carried out, results will be assessed by the Strategic Committee before presenting to the Approval Committee.
- All applicants shall be notified officially via eDANA system or email. The successful applicants shall accept or decline the offer via eDANA system or email. Decisions made by the Approval Committee is FINAL and any appeal on the results will not be entertained.
- The overall application and evaluation process including notification of the results will take 60 days after all responses and information have been received from the applicant. The application process work flow is shown in Figure 2.

Figure 2: Application Process Work Flow



- Stage 3: Contracting and Payment Process are as follows:
 - Fund recipients are required to submit letter of acceptance upon receiving the offer letter from MESTECC. Heads of the fund recipient companies or the Research Management Centres (RMC) of the institutions are required to sign the Project Agreement and submit bank statement information.
 - The signed agreement will then be signed by MESTECC's top management and the agreement will be sent back to the fund recipient for stamping.
 - The activities of 9.4.1 and 9.4.2 are expected to be completed within 30 days. Once the Secretariat has received the stamped agreement, the first payment to the fund recipient will be processed.

5.1.21 PROJECT MONITORING

All projects must be conducted in accordance with the terms and conditions outlined in the ICF Agreement. The project will be closely monitored to ensure that they are carried out successfully. Researchers are required to submit the following reports through the RMC:

- (i) Progress Report (PR) must be submitted before 31 January and 31 July each year. These reports will be used to monitor the progress of the project as well as determine the timing of the fund disbursements. This will take into account milestones achieved as well as 50% expenditure of the amount already disbursed. It is the project leader's responsibility to ensure that the correct and updated information related to the milestone achievement and expenditure are reported. Failure to submit the Progress Report is a serious omission that will result in the withholding of further fund disbursement or possible termination of project. The report can also be used to apply for changes in timeline for milestone achievement and project schedule.
- End of Project Report (EPR) should be submitted within three (3) months after project completion. All publications must acknowledge MESTECC's contribution as a fund provider. The End of Project Report requires the following information:
 - Direct outputs of the project
 - Extent of achievement of the original project objectives

- Technology transfer and commercialisation approach
- Benefits of the project, particularly project outputs and organisational outcomes
- Assessment of the project team, research approach, project schedule and project costs
- Sectoral/national impacts of the project
- Technical Report of the project

Note: The outcome of research under ICF that has commercial potential can be considered for additional funding under the Pre-Commercialisation funding category.

- MESTECC reserves the right to request for periodic information on the progress or to invite for seminar presentation and exhibition or to conduct site visits even after the project has been completed.
 - All variation is subjected to MESTECC's approval. The fund recipient needs to submit an application in writing via RMC to MESTECC for approval 1 months before the variations are made.
 - Virement can only be done once throughout the project duration. Requests for virement to purchase new equipment in the last six months of the grant's duration will not be entertained.
 - Under certain circumstances, MESTECC may allow for extension of project duration without additional funding. Applications received after the project completion date, will not be considered. The maximum extension given is up to 6 months including the submission of the End of Project Report.
 - If a project leader resigns, retires or moves to another organisation, RMC must immediately seek MESTECC's approval for a suitable replacement within the same institute. RMC must ensure that the new project leader has the relevant expertise and experience to continue the project to completion. Failing this, the institution may opt to terminate the project and write in to MESTECC.

- Publications

Researchers are encouraged to publish the results of their projects in local and renowned international publications only after all measures have been taken to protect any IPR generated from these projects. The contribution of MESTECC as the fund provider must be acknowledged at all times in all forms of publications.

- Quarterly Financial Report

RMC is required to submit to MESTECC a Quarterly Financial Report of all approved projects in digital file (excel format) as shown in Appendix 4.

- Transfer of Grants Between Organisations

The transfer of projects from one institution to another is not allowed as it can be quite problematic in terms of long delays to the project timeline related to the financial transfer, changes to agreement and team members, and getting the right contract assistants.

5.1.22 Ownership And Use Of R&D Equipment

All R&D equipment purchased under the grant must be recorded and tagged with the project number for monitoring and verification purposes. The equipment belongs to the fund recipient and the maintenance of the equipment is under the responsibility of the fund recipient once the project has been completed. However, such equipment are not for the sole use of the fund recipient, and must be made available to other research organisations as and when the need arises.

5.1.23 Intellectual Property Rights

- The end products developed under the International Collaboration Fund are encouraged to be patented and registered for IP Rights. The fund recipient has to notify the Secretariat in writing upon the successful registration of the IP.
- The IP rights of the project shall wholly owned by the recipient as specified in the International Collaboration Fund Agreement.
- Any provisional activities using the output of the project should acknowledge MESTECC as the fund provider.

5.1.24 Incentive For Intellectual Properties

- The applicant may apply for the following incentives after the project completion, provided the allocation for the incentive is stated during grant application:
 - Incentive for disclosure of the Project Intellectual Property:
RM500.00 Incentive for filing of patent of the Project Intellectual Property
RM5,000.00 Incentive for granting of patent Project Intellectual Property
RM10,000.00. Payment of this incentive shall be on a one-off basis.
- The organisation shall set aside and pay:
 - The incentive for disclosure of the Project Intellectual Property upon disclosure of the Project Intellectual Property;
 - The incentive for filing of patent of the Project Intellectual Property upon receipt of the proof of patent filing of the Project Intellectual Property; and
 - The incentive for granting of patent Project Intellectual Property upon receipt of the proof of patent granted of the Project Intellectual Property.
 - The grant recipient must disclose to MESTECC in writing, of the existence of the Project Intellectual Property not later than 60 days from the Project Completion Date.

5.1.25 Termination

- MESTECC reserves the right to withdraw the grant in the event of the following:
 - Any false information provided by the recipient;
 - Changes in scope of the project without the prior written consent of MESTECC;
 - Change of project leader without the prior written consent of MESTECC;

- Any misuse of grants;
 - Achievement / progress are not as specified in the Agreement of the Fund; and
 - Any breach of the agreement.
- Upon termination by MESTECC, recipients are required to pay back the amount of fund that has been disbursed;
 - MESTECC reserves the right, at any time, to review, suspend or withdraw approval of any grant or payment if such measures are deemed necessary; and
 - MESTECC reserves the right to make a claim against the recipient for any losses incurred as a result of any default by the recipient as specified in the agreement.

5.1.26 Expenditure Statements And Unexpended Grant

- * MESTECC reserves the right to request the grant recipient to submit a statement of expenditure at any time during the course of a grant, or to provide supplementary information in support of an interim or final expenditure statement.
- * The fund recipient must return the unexpended grant (disbursement mode) to MESTECC within three (3) months after the completion of the project. For terminated projects, fund recipient shall return the unexpended amount disbursed to MESTECC within one (1) month from date of termination notice.

5.1.27 Malaysian Code Of Responsible Conduct In Research

- * Everyone involved in the project shall comply with the principles and practices as stated in the Malaysian Code of Responsible Conduct in Research.

*** Smart Challenge Fund**

The Smart Challenge Fund (SMART Fund) is the government's initiatives which is open to businesses and researchers interested in competing for funding opportunities for which the Government has identified the strategic and prioritised needs (new technologies, processes, products) with the expectation that the deliverables will solve national problems and identify long term solutions.

Through this scheme, the Government will be investing in pre-commercialisation of technologies, processes, products that are highly innovative which can be translated into marketable output to spur the economy as well as for societal benefit.

Proposed projects must be specific, measurable, achievable, realistic and timely (SMART). The proposed projects must be well-designed, scientifically valid, and competitive with current technologies and research works.

(a) The objectives of this fund are divided into two categories:

- (i) to tackle strategic issues that will provide long term solutions, thus, ensuring commercialization of new R&D products to spur economic returns for the country. This fund covers pre-commercialisation stage with the technology readiness level (TRL) 4.

(ii) to tackle prioritised issues that need immediate solution leading to improvement of societal wellbeing. This fund covers pre- commercialisation stage with the technology readiness level (TRL) 6.

(b) Technology Readiness Levels is a method of characterising technological maturity from the most basic research (TRL 1) through to full-scale-real-world operation (TRL 9). The SMART Fund covers from TRL4 to TRL6 as shown in Figure 1. The description for every level of TRL can be seen in Table 1.

Figure 1: Scope of SMART Fund relative to Technology Readiness Level

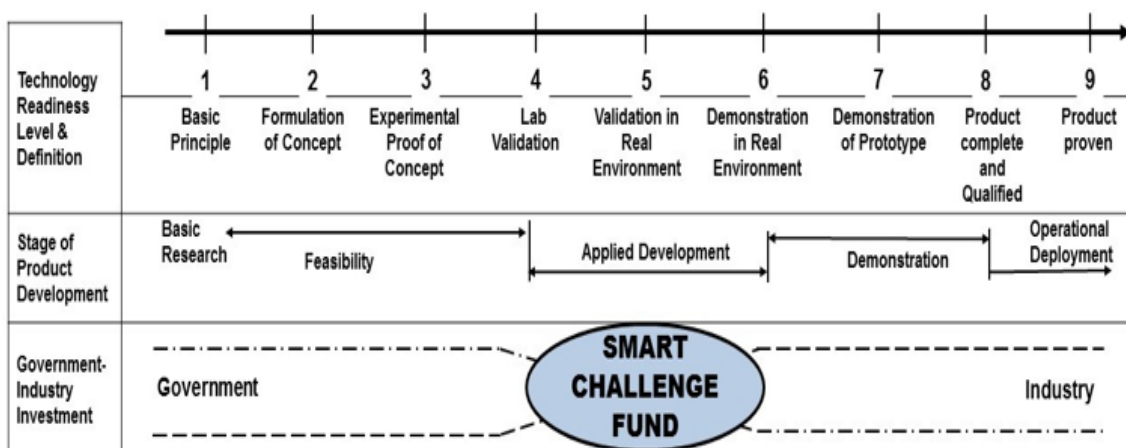


Table 1: Technology Readiness Level (TRL)

| TRL | Description | Characterisation |
|-----|-----------------------------------|---|
| 1 | Basic Principle | <ul style="list-style-type: none"> •Technology research • Pure science begins translation to R&D |
| 2 | Formulation of Concept | <ul style="list-style-type: none"> • Early studies for application formulation • Invention & Practical Application Begins |
| 3 | Experimental Proof of Concept | <ul style="list-style-type: none"> • Analytical validation & proof of concept • Start active research & development |
| 4 | Lab validation | <ul style="list-style-type: none"> • Validation in laboratory environment • Ready to begin bridge for technology transition |
| 5 | Validation in real environment | <ul style="list-style-type: none"> • Validation in relevant environment • Ready to enter technology development |
| 6 | Demonstration in real environment | <ul style="list-style-type: none"> • Demonstrated in relevant environment • Ready to enter system development |
| 7 | Demonstration of prototype | <ul style="list-style-type: none"> • Demonstrated in operational environment • Ready for limited production decision |
| 8 | System complete and qualified | <ul style="list-style-type: none"> • Compliant, qualified & test/demo complete • Ready for operational evaluation |
| 9 | System proven | <ul style="list-style-type: none"> • Completed operational evaluation • Ready for full-rate |

Source: Adapted from NASA TRL

(c) Priority Areas

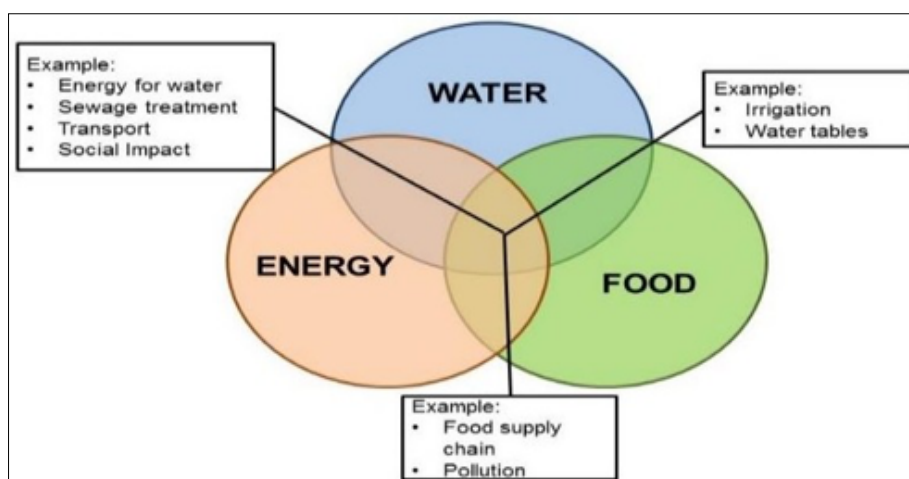
- (i) The proposed projects must be within the framework of the priority areas as follows:
- Water, Food, and Energy Nexus;
 - Green Growth for Sustainable Development; and
 - Medical and Healthcare.
- (ii) For each priority area, there will be thematic problem statements that require solution as in Table 2.

Table 2: Smart Fund's Priority Areas

| Priority Area | Examples of Thematic Areas | Gap |
|--|--|--|
| Water, Food & Energy (WFE) Nexus | Food Supply, Security and Traceability | <ul style="list-style-type: none"> • Develop and enhance local food production, healthy alternatives, food traceability through smart, new and cross cutting technology - utilising robotics, sensors, real-time data systems. • Create and advance knowledge/technologies that foster more efficient, safe, and secure use of resources within the food-energy-water nexus. • Develop/Innovate tools to achieve the Sustainable Development Goals' target and to manage local resources. |
| Green Growth for Sustainable Development | <p>Construction Material Usage and Waste Management</p> <p>New Technology Commercialisation in Agriculture</p> <p>Waste Management</p> | <ul style="list-style-type: none"> • Moving towards a circular economy solutions which aims to eradicate waste generation - developing a low carbon, resource efficient, sustainable and competitive economy. Reduction of the use of virgin materials, number of items going to the landfills, environmental risk, gas emission and pollution. • Supports the development of green industries and technologies which utilises fewer resources and generates fewer emissions during production of food, transport, construction, housing, energy, lighting, etc. |
| Medical and Healthcare | <p>Increase of Obesity Rate (related to hypertension and diabetes)</p> <p>Increase of Senior Citizen</p> | <ul style="list-style-type: none"> • Develop affordable assistive technologies and early detection devices. • Improve healthcare technologies application by developing future therapies, frontiers of physical intervention and optimising treatment. • Restoring function and/or enabling independence for older people, the disabled and those with long- term conditions through the application of engineering, ICT and physical sciences. • Effective technologies for individuals to manage their own healthcare. |

- (iii) Key enablers such as Internet of Things (IoT), nanotechnology, biotechnology and Industry 4.0 should be embedded in the priority areas.
- (iv) The Water, Food, and Energy Nexus focuses on the interdependence of water, food and energy resources by understanding the challenges and opportunities involved. Applicants are required to propose projects which include at least two resources as stated in Figure 2. The outcome of the project must:
 - Improve energy, water and food securities;
 - Address externality across sectors and decision-making at the nexus; and
 - Support transition to sustainability.

Figure 2: Water, Food, and Energy Nexus Resources



(d) Eligible Applicant

- (i) The fund is open to Small and Medium Companies, Government Research Institutes (GRI), Government Science, Technology and Innovation Organisation (Government STI organisation) and Public and Private Institutes of Higher Learning (IHL).
 1. Small and Medium Companies refer to companies registered with the following bodies:
 - Companies Commission of Malaysia (SSM) either under Registration of Company Act (1965) or Limited Liability Partnerships (LLP) Act 2012; or
 - Respective authorities or district offices in Sabah and Sarawak; or
 - Respective statutory bodies for professional service providers.
 2. Government STI organisation is a government organisation involved in R&D activities and other services related to STI in Malaysia.
- (ii) Definition of small and medium companies is as shown in Table 3.

Table 3: Definition of Small and Medium Companies by Size of Operation

| Category | Small Companies | Medium Companies |
|----------------------------|--|---|
| Manufacturing | <ul style="list-style-type: none">• Sales turnover from RM300,000 to less than RM15 mil; or• Employees from 5 to less than 75 | <ul style="list-style-type: none">• Sales turnover from RM15 mil to not exceeding RM50 mil; or• Employees from 75 to not exceeding 200 |
| Services and Other Sectors | <ul style="list-style-type: none">• Sales turnover from RM300,000 to less than RM3 mil; or• Employees from 5 to less than 30 | <ul style="list-style-type: none">• Sales turnover from RM3 mil to not exceeding RM20 mil ; or• Employees from 30 to not exceeding 75 |

Source: SME Corporation Malaysia

- (iii) Key enablers such as Internet of Things (IoT), nanotechnology, biotechnology and Industry 4.0 should be embedded in the priority areas.
- (iv) The Water, Food, and Energy Nexus focuses on the interdependence of water, food and energy resources by understanding the challenges and opportunities involved. Applicants are required to propose projects which include at least two resources as stated in Figure 2. The outcome of the project must:
 - Improve energy, water and food securities;
 - Address externality across sectors and decision-making at the nexus; and
 - Support transition to sustainability.
- (v) Proposals which include the tie-up of industry, academia and research are very much encouraged.

(e) Quantum and Duration on Funding

The quantum and duration of funding approved will be based on the merits of each application, not exceeding the limits as stated in Table 4:

Table 4: Quantum and Duration of Funding

| FUND CATEGORY | DURATION (months) | QUANTUM (RM) |
|---------------|-------------------|--------------|
| Strategic | 24 | 1,000,000 |
| Prioritised | 24 | 3,000,000 |

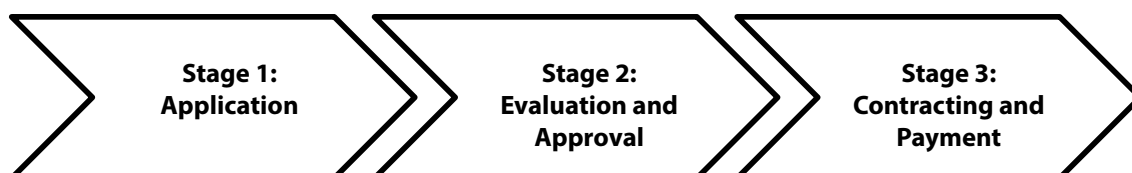
(f) Eligibility Criteria

- (i) All categories of companies must have a minimum of 51% equity held by Malaysians.
- (ii) Companies, whether as an applicant or a collaborator, must have a minimum paid-up capital of RM10,000.00.
- (iii) Companies must be in operation for at least 2 years from date of application. Companies shall provide audited financial report as proof.
- (iv) 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.
- (v) Only Malaysian citizens can apply and lead the project but can include international organisations or expatriates working in any of the organisations mentioned above as part of their project team.
- (vi) Researchers working under contract with IHLs, GRIs and STI organisation must ensure that their employment contract is still valid during the project duration.
- (vii) The project team should consist of members who are qualified and competent on the technical aspects of the whole project. Each team member must provide a curriculum vitae clearly stating their previous research and highlighting their experience and achievements.
- (viii) Applicants are allowed to lead only one project at any time.
- (ix) Projects must be conducted in Malaysia.
- (x) The proposed project must contain elements of technological innovation leading to commercialisation.
- (xi) The following are not eligible for funding under the SMART Fund:
 - Works already undertaken or under the responsibility/portfolio of certain Ministries, Departments or Agencies other than MESTECC; and
 - Application from Research Institutes that have their own internal research funding such as CESS Fund.

(g) Application Process

- (i) There are three (3) stages to the SMART Fund application as shown below:

Figure 3: SMART Business Model



(ii) Stage 1: Application process are as follows:

- The application starts with submission of the full paper proposal.
- Full proposal must be submitted through the online system at <https://edana.MESTECC.gov.my>.
- All applications must be reviewed and approved by the Head of the applicant's organisation or the Research Management Centre (RMC) of the institution. They should also declare that the proposed research has not been funded or submitted for funding to any other source. Failure to do so would cause the application to be rejected.
- In the online application, applicant needs to provide a concise summary of their project which shall answer the following questions:

 What are the problems you are solving?
 How to solve the problem?

 Who will benefit from your solution?
 What are the anticipated outcomes?
 What are the potential impacts?
- In the application form, applicant needs to provide proof of concept as the evidence that verifies the concept/theories/ideas that can be applied successfully in the real-world operation.
- The applicants also need to describe the SMART Business Model in the application form as in Figure 4.

Figure 4: SMART Business Model

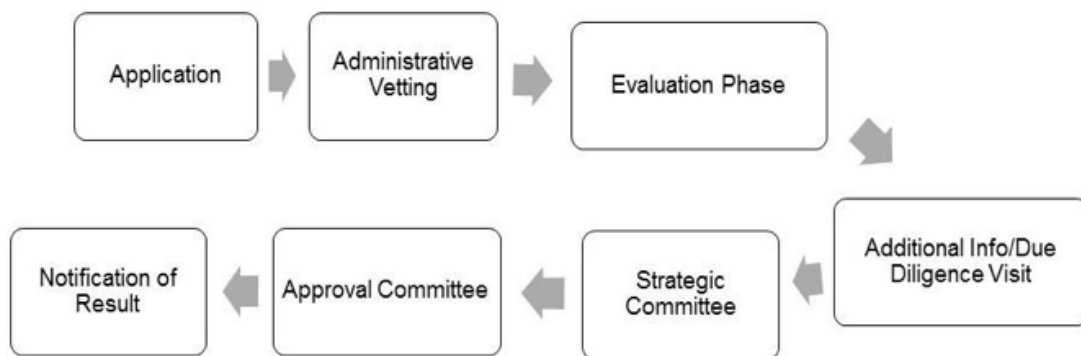
| Key Partners | Key Activities | Value Propositions | Customer Relationships | Customer Segments |
|---|---|---|---|---|
| Who are our key partners? Who are our key supplier? What are we getting from them? Giving them? | What key activities do we require? Manufacturing? Software? Supply Chain? | Which of our customer's problem are we helping to solve? Which customer needs are we satisfying? What are the key features of our product that match customer problem/need? | How will we get, keep and grow customers? Channels Through which channels do our customer segments want to be reached? | Who are our most important customers? What are their archetypes? What job do they want us to get done for them? |
| Key Resources What key resources we require? Financial, Physical, IP, HR? | | | | |
| Cost Structure What are the most important cost inherent in our business model? | | | Revenue Streams How do we make money? What's the revenue model? Pricing tactics? | |

- The proposal submitted will then be vetted by the Secretariat to ascertain whether the application and documents submitted fulfil the basic requirement. Incomplete or non-eligible proposal will be returned to the applicant.

(iii) Stage 2: Evaluation process is as follows:

- The complete paper will be reviewed by the Fund Expert Committee (FEC) for elements of their commercial potential and technical aspect.
- Applicants will be invited to present (pitch) their full paper proposal to the FEC. The applicant may be required to amend or revise the full paper to improve the proposal. In some instances, a due diligence may be required to be conducted after the evaluation process for verification purposes.
- Once the due diligence has been carried out, results will be assessed by the Strategic Committee before presenting to the Approval Committee.
- All applicants shall be notified officially via eDANA system or email. The successful applicants shall accept or decline the offer via eDANA system or email. Decisions made by the Approval Committee is FINAL and any appeal on the results will not be entertained.
- The overall application and evaluation process including notification of the results will take 60 days after all responses and information have been received from the applicant. The application process work flow is shown in Figure 3.

Figure 5: Application process work flow



(iv) Stage 3: Contracting and Payment Process are as follows:

- Fund recipients are required to submit letter of acceptance upon receiving the offer letter from MESTECC. Heads of the fund recipient companies or the Research Management Centres (RMC) of the institutions are required to sign the Project Agreement and submit bank information (companies are required to open a designated bank account solely for the purpose of the project) to MESTECC.

- The signed agreement will then be signed by MESTECC's top management and the agreement will be sent back to the fund recipient for stamping.
- The activities of 6.4.1 and 6.4.2 are expected to be completed within 30 days. Once the Secretariat has received the stamped agreement, the first payment to the fund recipient will be processed.
- Memorandum of Understanding / Letter of Intent between collaborating Institutions must accompany the application. However, should the grant be approved, an agreement between the collaborating parties stating the respective scope of work, ownership of IP and all equipment purchased during the tenure of the project must be submitted to the Secretariat within 30 days from the date of the offer letter, failing which MESTECC has the right to revoke the approval.

- Innofund

Innovation contributes to productivity, economic growth and societal wellness. It can be the recombination, fusion or integration of technologies that lead to new products, processes or services or the refinement of existing technologies with improved value enhanced efficiency or cost reduction. The final result of innovation is new products, processes or systems by which value can be created for customers, businesses and society. Realising the importance of innovation for wealth creation and social well-being, the Government initiated the Innovation Fund.

(a) Objectives

(i) Enterprise Innovation Fund (EIF)

The aim of the Enterprise Innovation Fund is to increase the participation of micro-businesses and individuals in innovative activities and encourage technological innovation of new or existing products, process or services for commercialisation.

(ii) Community Innovation Fund (CIF)

The aim of the Community Innovation Fund is to assist community groups in translating knowledge and ideas into products, processes or services that improve the socio-economic standing and quality of life of the community.

(b) Priority Areas

InnoFund focuses on the following research areas:

- Life Sciences,
- Computer Sciences and Information and Communication Technology (ICT),
- Agriculture Sciences/Agricultural Engineering
- Environmental Sciences,
- Advanced Materials Science,
- Chemical Sciences,
- Physical and Mathematical Sciences,

- Engineering,
- Medical and Health Sciences, and
- Social Sciences and Humanities

(c) Quantum and Duration of Funding

The quantum and duration of funding approved will be based on the merits of each application, not exceeding the limits as stated in Table 1.

Table 1: Quantum and Duration of Funding

| Type of Fund | Duration | QUANTUM (RM) | Maximum Quantum (RM) |
|----------------------------|-----------|-----------------------------------|----------------------|
| Enterprise Innovation Fund | 18 months | Individual | 50,000 |
| | | Sole proprietorship / Partnership | 150,000 |
| | | Companies | 500,000 |
| Community Innovation Fund | 18 months | As listed | 500,000 |

(d) Eligible Applicant

- (i) The eligible applicants are listed according to the types of grants available is as shown in Table 2:

Table 2: Eligible Applicant for InnoFund

| Eligible Applicant | Enterprise InnoFund | Community InnoFund |
|-----------------------------------|---------------------|--------------------|
| Individual | √ | |
| SoleProprietorship/Partnership | √ | |
| Micro, Small and Medium Companies | √ | |
| Registered Associations/ NGOs | | √ |
| Registered Cooperatives | | √ |
| Community Group | | √ |

- (1) Sole proprietorship/partnership refer to business entities registered with the following bodies:

- Companies Commission of Malaysia (SSM) under Registration of Businesses Act 1956 (ROBA 1956); or
- Respective authorities or district offices in Sabah and Sarawak; or
- Respective statutory bodies for professional service providers.

- (2) Micro, Small and Medium Companies refer to companies registered with the following bodies:

- Companies Commission of Malaysia (SSM) either under the Registration of Business Act (1956) or Registration of Company Act (2016) or Limited Liability Partnerships (LLP) Act 2012; or
- Respective authorities or district offices in Sabah and Sarawak; or
- Respective statutory bodies for professional service providers.

(ii) Definition of micro, small and medium companies is as shown in Table 3:

Table 3: Definition of Micro, Small and Medium Companies by Size of Operation

| | Micro Companies | Small Companies | Medium Companies |
|----------------------------|--|---|--|
| Manufacturing | <ul style="list-style-type: none"> • Sales turnover of less than RM300,000; or • Less than 5 full-time employees | <ul style="list-style-type: none"> • Sales turnover from RM300,000 to less than RM15 mil; or • Employees from 5 to less than 75 | <ul style="list-style-type: none"> • Sales turnover from RM15 mil to not exceeding RM50 mil; or • Employees from 75 to not exceeding 200 |
| Services and Other Sectors | <ul style="list-style-type: none"> • Sales turnover of less than RM300,000; or • Less than 5 full-time employees | <ul style="list-style-type: none"> • Sales turnover from RM300,000 to less than RM3mil; or • Employees from 5 to less than 30 | <ul style="list-style-type: none"> • Sales turnover from RM3 mil to not exceeding RM20 mil; or • Employees from 30 to not exceeding 75 |

Source: SME Corporation Malaysia

(e) Eligibility Criteria

- (i) The criteria for Enterprise Innovation Fund are as follows:
- All categories of companies must have a minimum of 51% equity held by Malaysians.
 - Applicant under the companies categories must have minimum paid up capital of RM10,000.00. However, individual and sole proprietor is exempted from this stipulation but must provide justification and supporting documents on the ability to sustain itself (example: bank statement).
 - None of the companies directors or project team members must have been convicted of any fraudulent activities or the company been declared bankrupt, under liquidation or placed under receivership.
 - The project proposal must contain elements of technological innovation leading to commercialisation of innovative products, processes and services.
 - The project must be for the development of new or existing products, processes or services with the potential for commercialisation. Projects or products which are in the research stage or are ready for production or commercialisation are not eligible.
 - The project team must provide evidence of technical competency to undertake the proposed project. The curriculum vitae and supporting

documents of the Project Leader and each project team member must also be submitted.

- Only Malaysian citizens can apply and lead the project but can include international organisations or expatriates working in any of the organisations mentioned above as part of their project team.
- Application from an individual must be accompanied by a supporting letter from a referee.
- Applicant can only lead only one project at any time.
- Project must be conducted in Malaysia.

(ii) The criteria for Community Innovation Fund are as follows:

- Applicant must be a registered/government recognised Malaysian Community Group.
- The proposal must contain innovative elements leading to the development of products, services or processes that improve societal well-being.
- Applicant must show proof of financial capability to support the portion of project costs not funded under CIF.
- Only Malaysian citizens can apply and lead the project but can include international organisations or expatriates working in any of the organisations mentioned above as part of project team.
- Applicant can only lead only one project at any time.
- Project must be conducted in Malaysia.

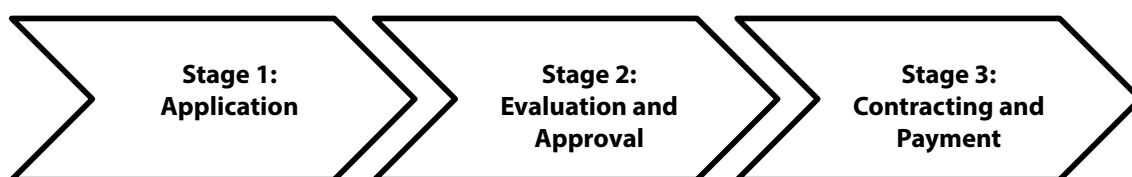
(iii) The following cases are not eligible for funding under the InnoFund

- Work, activity and initiative that are under the purview of Ministry, Department or Agency.
- Applications from the Research Wing of Government Linked Companies (GLC).
- Applications from Research Institutes, Institutes of Higher Learning and Science, Technology and Innovation Agency.
- Applications from large or trading companies.
- Project proposals substantially similar to project that was previously approved and completed.

(f) Application Process

(i) There are three (3) stages of the InnoFund application as shown below:

Figure 1: SMART Business Model



(ii) Stage 1: Application process are as follows:

- The application starts with submission of the full paper proposal.
- Full proposal must be submitted through the online system at <https://edana.MESTECC.gov.my>.
- All applications must be reviewed and approved by the head of the applicant's organisation. They should also declare that the proposed research has not been funded or submitted for funding to any other source. Failure to do so would cause the application to be rejected.
- The proposal submitted will then be vetted by the Secretariat to ascertain whether the application and documents submitted fulfil the basic requirement. Incomplete or non-eligible proposal will be returned to the applicant.

(iii) Stage 2: Evaluation process are as follows:

- The complete paper will be reviewed by the Fund Expert Committee (FEC) for elements of their commercial potential and technical aspect.
- Applicants will be invited to present (pitch) their full paper proposal to the FEC. The applicant may be required to amend or revise the full paper to improve the proposal. In some instances, a due diligence may be required to be conducted after the evaluation process for verification purposes.
- Once the due diligence has been carried out, results will be assessed by the Strategic Committee before presenting to the Approval Committee.
- All applicants shall be notified officially via eDANA system or email. The successful applicants shall accept or decline the offer via eDANA system or email. Decisions made by the Approval Committee is FINAL and any appeal on the results will not be entertained.
- The overall application and evaluation process including notification of the results will take 60 days after all responses and information have been received from the applicant. The application process work flow is shown in Figure 2.

Figure 2: Application process work flow



(iv) Stage 3: Contracting and Payment Process are as follows:

- Fund recipients are required to submit letter of acceptance upon receiving the offer letter from MESTECC. Heads of the fund recipient companies or institutions are required to sign the Project Agreement and submit bank information (companies are required to open a designated bank account solely for the purpose of the project) to MESTECC.
- The signed agreement will then be signed by MESTECC's top management and the agreement will be sent back to the fund recipient for stamping.
- The activities of 6.4.1 and 6.4.2 are expected to be completed within 30 days. Once the Secretariat has received the stamped agreement, the first payment to the fund recipient will be processed.
- Memorandum of Understanding / Letter of Intent between collaborating institutions must accompany the application. However, should the grant be approved, an agreement between the collaborating parties stating the respective scope of work, ownership of IP and all equipment purchased during the tenure of the project must be submitted to the Secretariat within 30 days from the date of the offer letter, failing which MESTECC has the right to revoke the approval.

- Facilitation Fund

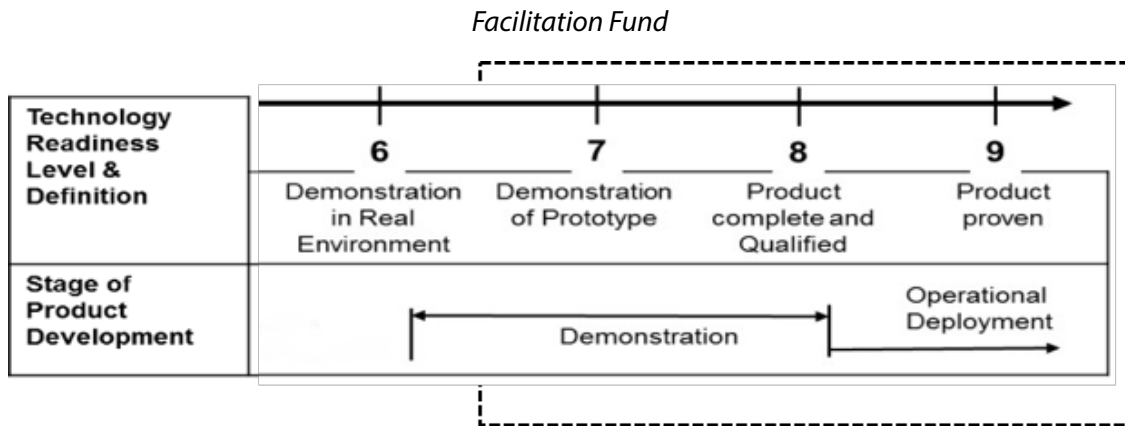
(i) Objectives

- (a) To reduce the valley of death from pre-commercialisation phase to commercialisation.
- (b) Increase the readiness of R&D products to be marketed, through hand-holding by MESTECC agency (implementing agency)

(ii) Eligibility Criteria

- (a) The criteria for facilitation fund are as follows:-
 - All categories of SME must have a minimum of 51% equity held by Malaysians;

- Applicant must collaborate with the implementing agency that appointed by MESTECC;
- R&D output must be at least TRL 7 until TRL9 phase; and
- Applicants are allowed to apply only one application at any given time.



(b) Implementing agency appointed by MESTTEC are as follows:-

- SIRIM Berhad;
- Bioeconomy Corporation;
- MIMOS Berhad;
- Majlis Rekabentuk Malaysia (MRM);
- Technology Park Malaysia (TPM); dan
- CyberSecurity Malaysia (CSM).

(iii) Quantum and Duration of Finding

The maximum quantum and duration of funding is RM500,000.00 and 18 months respectively.

(iv) Scope of Funding

(a) The scope of funding for Facilitation Fund are as follows:-

- Design (product and visual communication);
- Accreditation / Certification / Technology Audit (except for manufacturing factories or manufacturing plants, Original Equipment Manufacturer (OEM));
- Incubation includes mentoring (Mentoring);
- Project-related human capital development (Good Manufacturing Practice (GMP), Halal, Hazard Analysis and Critical Control Points (HACCP) exercises);
- Up-Scaling from the pilot plant / prototype; and
- Market research or product validation and marketing-related activities.

The list of Implementing Agencies based on the scope of work are as follows:-

| IMPLEMENTING AGENCY | SECTOR | Scope of Work | | | | | |
|---------------------|-----------------------------------|---------------|---------------|------------|---------------|------------|-----------------|
| | | Design | Accreditation | Incubation | Human Capital | Up Scaling | Market Research |
| BIOECONOMY | Bio Based | | √ | | √ | √ | √ |
| CSM | ICT | √ | √ | | √ | √ | √ |
| MIMOS | ICT / E&E | √ | √ | √ | √ | | √ |
| MRM | All Industries | √ | √ | | √ | | |
| SIRIM | All Industries | √ | √ | | √ | √ | √ |
| TPM | Biotechnology / ICT / Engineering | √ | √ | √ | √ | √ | √ |

(v) Application

Application for Facilitation Fund application should be submitted online via <https://edana.mestec.gov.my/>

- International Collaboration Fund

The International Collaboration Fund (ICF) is a grant provided by the Government for international joint R&D projects between researchers from Malaysia and other countries. The aim of the fund is to provide a platform for investment in expanding and enhancing research capacity, and increasing collaborative R&D partnership for competitive R&D projects that are innovative, give high impact and can subsequently contribute to the advancement of knowledge and technology development leading to commercialisation.

In encouraging international collaboration on a higher level, we hope to increase Malaysia’s international competitiveness through research findings which are able to lead to new technologies while strengthening national research capacity and capability.

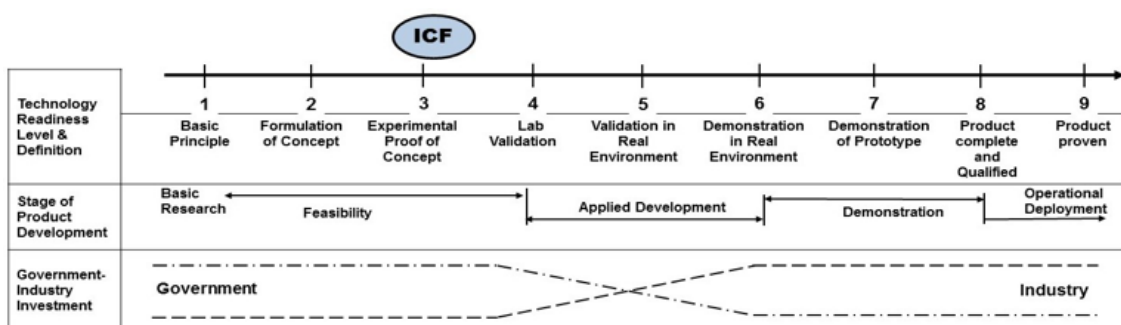
(i) Objective

The objective of this fund is to encourage and promote co-operation in science, technology and innovation through joint research and development activities for mutual benefit. This fund is intended to assist applicant to pursue analytical validation and proof of concept on Technology Readiness Level (TRL) 3.

(ii) Technology and Readiness Level

Technology Readiness Levels is a method of characterising technological maturity from the most basic research (TRL 1) through to full-scale-real-world operation (TRL 9). The International Collaboration Fund covers TRL3 as shown in Figure 1.

Figure 1: Scope of International Collaboration Fund Relative to Technology Readiness Level



(iii) Research Areas

- (a) The proposed project must be within the framework of the research areas as follows:
- Biotechnology
 - Engineering and Technology
 - Computer Sciences and Information and Communication Technology (ICT)
 - Medical and Health Sciences
 - Agriculture and Forestry

The different areas under the divisions are listed in Table 1.

Table 1: Research Division and Category

| NO | DIVISION DESCRIPTION | CATEGORY DESCRIPTION |
|----|--|---|
| 1 | Biotechnology | Biotechnology |
| 2 | Agriculture And Forestry | Agricultural Science And Technology |
| 3 | | Forestry Sciences and Technology |
| 4 | Engineering And Technology | Applied Sciences And Technologies |
| 5 | | Engineering and Technology |
| 6 | Information, Computer And Communication Technology (ICT) | Information, Computer And Communications Technology (ICT) |
| 7 | Medical and Health Sciences | Medical and Health Sciences |

- (b) Key enablers such as, Internet of Things (IoT), Nanotechnology and Industry 4.0 should be embedded in the areas selected.

(iv) Eligibility Criteria

- (a) This fund is open to all local researchers, scientists and engineers who are employed on a permanent or contractual basis from the following organisations:
- Government Research Institutions (GRIs);
 - Government Science, Technology and Innovation (STI) Agencies; and
 - Public and Private Institutions of Higher Learning (IHL) with accredited research programmes.
- (b) Government STI organisation is a government organisation involved in R&D activities and other services related to STI in Malaysia.
- (c) Researchers can lead only one (1) project at any time and main location of the project must be in Malaysia.
- (d) Researchers working under contract with IHLs, GRIs and STI organisation must ensure that their employment contract is still valid for the project duration.
- (e) Proposal may be required to obtain approval from relevant authorities for matters related to National safety, security and other sensitive issues.
- (f) Branch Institutions in Malaysia cannot collaborate with the main or branch institutions elsewhere. Collaboration must be with institutions other than their own.
- (g) International Collaborator's organisation shall equivalent to applicant organisation as follows:
- Government Research Institutions (GRIs);
 - Government Science, Technology and Innovation (STI) Agencies; and
 - Public and Private Institutions of Higher Learning (IHL) with accredited research programmes.
- (h) International Collaborator Information
- The following information shall be included in the application form:
- Name of researcher;
 - Organisation;
 - Country;
 - Passport number;
 - Curriculum Vitae (CV);
 - Title of project;

- Allocation amount;
- Duration of project;
- Memorandum of Understanding (MoU); and
- Letter of Acceptance between Applicant and Collaborator detailing respective scope of work.

(v) Responsibility of the Project Leader

The successful implementation of the project is the responsibility of the project leader. Project leaders have to ensure that the projects are carried out effectively to meet the specified objectives and milestones within the timeframe and funding allocated.

(vi) Duration and Quantum

- (a) The project duration is for a maximum of 24 months.
- (b) Quantum of funding is a maximum of RM500,000.00. Based on approval, the first allocation will be disbursed upon stamping of agreement. Subsequent payment will be disbursed based on progress and expenditure of first allocation that has been spent.

(vii) Scope of Funding

- (a) ICF covers research leading to laboratory proof of concept, towards the development of new technologies, processes or products. This fund covers the following expenses such as wages, travelling, rentals, materials, modification, services and equipment. Detail scope of funding as described in para 8.4. ICF does not allow cross border of funding.
- (b) Expenses related to overseas trips for conference including registration fee will be funded not more than RM15,000.00.
- (c) Expenses related to work carried out at the international counterpart laboratory will be funded up to a maximum of RM20,000.00. The eligible expenses are as shown in Table 2 according to the latest circular. Please refer to “Pekeliling Perbendaharaan Kadar Dan Syarat Tuntutan Elaun, Kemudahan Dan Bayaran Kepada Pegawai Perkhidmatan Awam Kerana Menjalankan Tugas Rasmi”

Table 2: Detail on the expenses related to overseas trip

| Overseas Trip | Present paper | Lab Work |
|----------------------|-----------------------------------|---------------------------|
| Eligible Person | 1 Project leader or co-researcher | |
| Duration | Not more than 1 weeks | Not more than 2 weeks |
| Frequency | Once during project duration | |
| Ceiling Cost | Not more than RM15,000.00 | Not more than RM20,000.00 |

- (d) The funding can be utilised for the following categories:

(1) Wages and Allowances for Temporary and Contract Personnel

- Includes wages and allowances for a maximum of two (2) temporary/ contract personnel who is directly engaged in the project.

- The maximum wages/allowances for a temporary/contract personnel is up to RM2,500 per month/per head inclusive of deductions for SOCSO/EPF. The allocation cannot be used for tuition fees.

(2) Travel and Transportation

- Includes travel and transportation expenses for domestic and overseas trips directly related to the project.
- Travel is limited to economy class using the shortest direct routes by either MAS or Air Asia except under extenuating circumstances.
- The allocation for travelling overseas must be budgeted for in the research proposal.
- Overseas trips must meet the following criteria:

Lab work

- Where domestic facilities and expertise are inadequate locally, the team leader or member (not research students) can conduct a portion of the research at their counterpart's laboratory overseas. However, the venue must be suitable in terms of facilities, expertise and technology transfer. This must be indicated in the application form and the budget must include air fare, accommodation, food and transportation.
- Lab work detail and activities must be made early the project.
- The project leader or co-researcher is only allowed to go once for the duration of the project.
- The project leader needs to get approval from MESTECC in writing and submit detail of lab work plan.

Conferences/seminars

- For oral presentation of papers only at conferences/seminars on the findings of the project but every effort must be made early on to protect any IP that may be derived from the project.
- The project leader or co-researcher is only allowed to go once for the duration of the project.
- The progress of project must be more than 50% before applying to attend the conference and within original project timeline.
- The project leader needs to get approval from MESTECC in writing and submit a copy of the acceptance letter from the organiser, abstract of the paper and detail of expenses required.
- The project leader must also submit a copy of the full paper presented after the conference.

(3) Rentals

Rental for space, equipment, transportation and any other items directly related to the project can be included.

(4) Research Materials and Supplies

Expenses supported are for research materials and supplies directly related to the project. Please provide details of items required in terms of quantity and cost. The grant will not support payments for utilities (including broadband), books, stationeries and subscription to journals etc.

(5) Minor Modifications and Repairs

- Only expenses for minor modifications and repairs of laboratory, equipment or any other items directly related to the project can be included.
- The maintenance costs of existing equipment used during the duration of project period can also be included.
- The cost of maintenance of any equipment purchased will not be borne by the ICF after the project is completed.

(6) Special Services

All services under this category must be itemized and is only for services directly related to the project as follows:

- Payment for enumerators
- Honorarium for subjects and experts
- Sample testing and analysis
- Data processing
- Patent registration in Malaysia, excluding maintenance cost
- IP incentives for patent and industrial design only
- Fees related to paper publication of the project
- Registration fee for conference

(7) R&D Equipment and Accessories

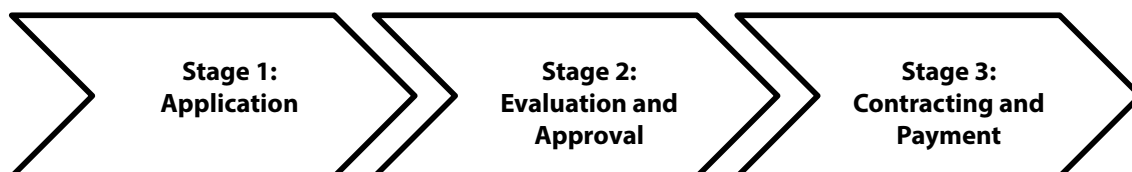
- Justification for purchase of specialised equipment must be given. Project leader will need to provide information on the availability of such equipment and why it cannot be used or shared.
- Accessories are items that are necessary to upgrade the capability of existing equipment directly related to the project.

- Purchasing of equipment must be made in the first year.
 - Researchers are encouraged to share R&D equipment and avoid purchasing of the same R&D equipment within the same research institutions.
 - Funding for specialised equipment and accessories cannot be more than 40% of the total project expenses. Applicants need to provide an itemized list along with the justifications, specifications, quotations and estimated costs for such purchases.
 - Purchasing of personal computers, data logging, workstation, laptops, printers, servers, hosting, toners and scanners are not allowed.
- (e) Items not listed under the scope of funding may be given consideration based on special approval.
- (f) Non-Qualifying Project Activities

Scientific and technical information services such as collecting, coding, recording, classifying, disseminating, translating, analysing, evaluating, bibliographic services, scientific and technical information extension advisory services and compilation of data are excluded from the main activities of the project except when they form an integral part of the project. In such a case, applicants must provide a statement indicating the research objectives to which the data would contribute.

(viii) Application Process

- (a) There are three (3) stages to the International Collaboration Fund application as shown below:

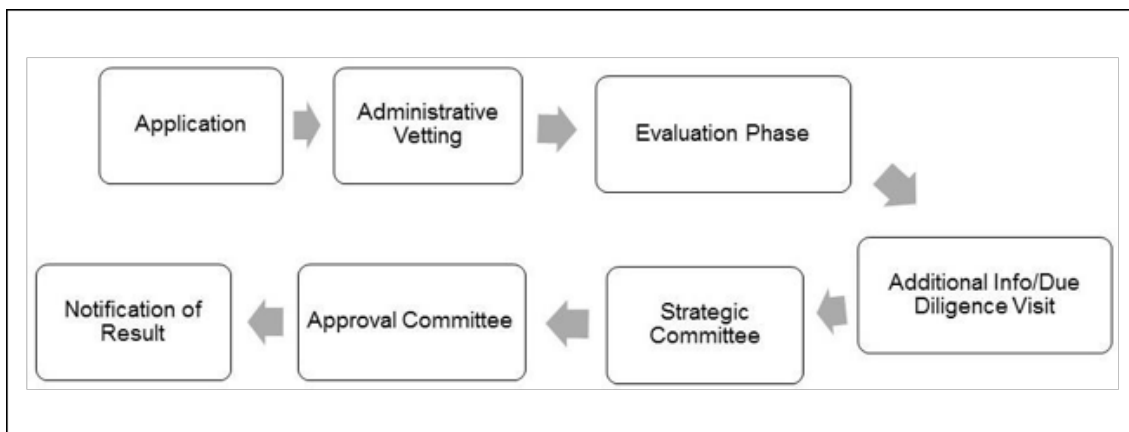


- (b) Stage 1: Application process are as follows:
- The application starts with submission of the full paper proposal.
 - Full proposal must be submitted through the online system at <https://edana.mosti.gov.my>. Applicants and collaborators must provide document as listed in Appendix 2.
 - All applications must be reviewed and approved by the Head of the applicant's organisation or the Research Management Centre (RMC) of the institution. They should also declare that the proposed research has not been funded or submitted for funding to any other source. Failure to do so would cause the application to be rejected.
 - The proposal submitted will then be vetted by the Secretariat to ascertain whether the application and documents submitted fulfil the basic requirement. Incomplete or non-eligible proposal will be returned to the applicant.

(c) Stage 2: Evaluation process is as follows:

- The complete paper will be reviewed by the Fund Expert Committee (FEC) for elements of their commercial potential and technical aspect.
- Applicants will be invited to present (pitch) their full paper proposal to the FEC. The applicant may be required to amend or revise the full paper to improve the proposal. In some instances, a due diligence may be required to be conducted after the evaluation process for verification purposes.
- Once the due diligence has been carried out, results will be assessed by the Strategic Committee before presenting to the Approval Committee.
- All applicants shall be notified officially via eDANA system or email. The successful applicants shall accept or decline the offer via eDANA system or email. Decisions made by the Approval Committee is FINAL and any appeal on the results will not be entertained.
- The overall application and evaluation process including notification of the results will take 60 days after all responses and information have been received from the applicant. The application process work flow is shown in Figure 2

Figure 2: Application Process Work Flow



(d) Stage 3: Contracting and Payment Process are as follows:

- Fund recipients are required to submit letter of acceptance upon receiving the offer letter from MESTECC. Heads of the fund recipient companies or the Research Management Centres (RMC) of the institutions are required to sign the Project Agreement and submit bank statement information.
- The signed agreement will then be signed by MESTECC's top management and the agreement will be sent back to the fund recipient for stamping.
- The activities of 9.4.1 and 9.4.2 are expected to be completed within 30 days. Once the Secretariat has received the stamped agreement, the first payment to the fund recipient will be processed.

5.2 Malaysian Technology Development Corporation Sdn Bhd (MTDC)

5.2.1 Commercialisation of Research and Development Fund (CRDF)

CRDF is for the funding of commercialisation activities of locally developed technologies undertaken by Malaysian owned companies. The technologies can be those developed by the public sector or they can also be the output of in-house research and development (R&D) activities by the companies.

(a) Commercialisation of Research and Development Fund (CRDF 1)

CRDF 1 is a grant for the commercialisation of R&D output from public and private University (PPU) / Government Research Institute (GRI) by a spin-off company ('Syarikat Terbitan Universiti, STU') or a start-up.

A spin-off company is defined as a company with local Public or Private University/Government Research Institution ownership.

Under this fund, the STU is required to operate their business from any recognised Technology Centres locally. The company is also required to focus their commercialisation activities on business development while producing their product via out-sourcing mode.

(i) Basic Eligibility Criteria

- Spin-off The company incorporated under the Companies Act, 1965;
- The company must be at least 51% owned by Malaysian;
- The proposed technology to be commercialised must be from one of the Priority Technology Clusters identified by MESTECC; and
- The R&D must have been completed successfully and commercial-ready prototype is available.

(ii) Funding Quantum

- CRDF 1 provides funding in the form of partial grants with a maximum of RM500,000 or 70% of the eligible expenses (whichever is lower).

(iii) Eligible Expenses

- Technology consultation fees
- Administration and overheads
- Product registration
- Cost of outsourcing production
- Advertising, marketing and promotion
- Value added services
- Legal and secretarial costs

(iv) Project duration

- Two (2) years Not more than 12 months.
- Research and Development (R&D) Services

(b) Commercialisation of Research and Development (CRDF 2)

CRDF 2 is a grant for the commercialisation of any local R&D by a Small & Medium Enterprise (SME).

SME definition:-

- For the manufacturing sector, SMEs are defined as firms with sales turnover not exceeding RM50 million or number of full-time employees not exceeding 200.
- For the services and other sectors, SMEs are defined as firms with sales turnover not exceeding RM20 million or number of full-time employees not exceeding 75.

(i) Basic Eligibility Criteria

- The company incorporated under the Companies Act, 2016 ;
- The company must be at least 51% owned by Malaysian;
- The proposed technology to be commercialised must be from one of the Priority Technology Clusters identified by MESTECC; and
- The R&D must have been completed successfully and commercial-ready prototype is available.

(ii) Funding Quantum

- CRDF 2 provides funding in the form of partial grants with a maximum of RM4 million or 70% of the eligible expenses (whichever is lower).

(iii) Eligible expenses

• Equipment

- Technology acquisition
- Administration and overheads
- Production
- Advertising, marketing and promotion
- Intellectual property and standards compliance
- Value added services

(iv) Project duration

- 6 years (2 years Implementation and 4 years Payback Period)

(c) Commercialisation of Research and Development Fund (CRDF 3)

CRDF 3 is a grant for the commercialization of any local R&D by non-SMEs.

(i) Basic Eligibility Criteria

- The company is incorporated under the Companies Act 2016 ;
- The company must be at least 51% Malaysian-owned;
- The proposed technology to be commercialised must be from one of the Priority Technology Clusters identified by MESTECC; and
- The R&D must have been completed successfully and a commercial-ready prototype is available.

(ii) Funding Quantum

- CRDF 3 provides funding in the form of partial grants with a maximum of RM4 million or 50% of the eligible expenses (whichever is lower).

(iii) Eligible expenses

- Equipment
- Technology
- Advertising, Marketing & Promotion
- Production
- Intellectual property and standards compliance

(iv) Project duration

- 6 years (2 years Implementation and 4 years Payback Period)

5.3 Cradle Fund Sdn Bhd

5.3.1 Cradle Investment Programme (CIP)

Cradle Investment Programme 300 (CIP300) is a pre-commercialisation programme that provides a conditional grant and value added assistance for entrepreneurs to kick-start innovative technology based start-ups to develop and commercialise their products or services.

The purpose of this programme is to assist early stage entrepreneurs to both develop and commercialise their products. CIP300 helps address the funding gap that exists for early stage businesses at the ideation stage and prototyping stages as well as early commercialisation of products.

This CIP300 is eligible for application by individual or locally incorporated companies operating less than three (3) years.

(i) Basic Eligibility Criteria

- Primary applicant is a Malaysian aged 18 years and above.
- Primary applicant is a permanent resident in Malaysia.
- A team comprises of ONLY Two (2) Members.
- A Sdn Bhd incorporated less than three (3) years (if applicable).
- At least 51% of the company's equity is held by Malaysian.
- For company, accumulated revenue is not more than RM3 million.
- Technology-based industries which include ICT, Non ICT and others.

(ii) Funding Quantum

- A conditional grant and value added assistance up to RM300,000
- Value added support includes:
 - An enhanced Coaching & Mentoring Programme throughout the funding period.
 - Opportunity to be matched with potential investors.
 - Match making with Cradle's partners.
 - Internal training programme to support creation, innovation and commercialisation.
 - Participation in business and networking events under Cradle.
 - Media and public relation support.

(iii) Project duration

- Up to eighteen (18) months.

6. TAX INCENTIVES

Incentives for Research and Innovation

The Promotion of Investments Act, 1986 defines research and development (R&D) as any systematic or intensive study carried out in the field of science or technology with the objective of using the results of the study for the production or improvement of materials, devices, products, produce or processes but does not include:

- Quality control of products or routine testing of materials, devices, products or produce;
- Research in the social sciences or humanities;
- Routine data collection;
- Efficiency surveys or management studies; and
- Market research or sales promotion.

To further strengthen Malaysia's foundation for more integrated R&D, companies which carry out design, development and prototyping as independent activities are also eligible for incentives.

6.1 Main Incentives for Research and Development

(i) Contract R&D Company

A Contract R&D company, i.e. a company that provides R&D services in Malaysia to a company other than its related companies, is eligible for:

- Pioneer Status with income tax exemption of the 100% of the statutory income for five (5) years. Unabsorbed capital allowances as well as accumulated losses incurred during the pioneer period can be carried forward and deducted from the post pioneer income of the company, or
- Investment Tax Allowance (ITA) of 100% on the qualifying capital expenditure incurred within ten (10) years. The allowance can be offset against 70% of the statutory income for each year of assessment. Any unutilised capital allowances can be carried forward to subsequent years until fully utilised.

(ii) R&D Company

A R&D company, i.e. a company that provides R&D services in Malaysia to its related companies or to any other company, is eligible for an ITA of 100% on the qualifying capital expenditure incurred within ten (10) years. The allowance can be offset against 70% of its statutory income for each year of assessment. Any unutilised allowances can be carried forward to subsequent years until fully utilised.

Should the R&D Company opt not to avail itself of the allowance, its related companies can enjoy double deduction for payments made to the R&D Company for services rendered.

Eligibility criteria:

- i. The R&D activities undertaken must comply with the definition of R&D under the Promotion of Investments Act, 1986;
- ii. The R&D activities undertaken must be in accordance with the needs of the country and bring benefits to the Malaysian economy;
- iii. At least 70% of the income of the company should be derived from its R&D services activities. Only R&D services income is to be exempted and income generated from Intellectual Property (IP) if any, is excluded.
- iv. For manufacturing-based research and development, the company must have adequate number of full-time employees working in Malaysia with degree or diploma in technical fields with relevant experience. Those employees must perform research and technical functions and comprise of at least 50% of the company's total workforce.

- v. For agricultural-based research and development, the company must have adequate number of full-time employees working in Malaysia with degree or diploma in technical fields with relevant experience. Those employees must perform research and technical; functions and comprise of at least 5% of the company's total workforce.
- vi. The company must incur adequate amount of operating expenditure annually to support the company in conducting its R&D services activities/business operation in Malaysia. The operating expenditure should include local services for insurance, legal, banking, ICT and transportation; if those services could be sourced from local/domestic service providers. However, this amount shall not include the cost of goods sold, depreciation, interest on borrowings and expenses that are not directly involved in the company's proposed activities.

(iii) In-house R&D

A company that undertakes in-house R&D to further its business can apply for an ITA of 50% of the qualifying capital expenditure incurred within ten (10) years. The company can offset the allowance against 70% (100% for promoted areas) of its statutory income for each year of assessment. Any unutilised allowances can be carried forward to subsequent years until fully utilised.

(iv) Incentives in Reinvestment of R&D Activities

R&D companies/activities mentioned in categories (i) – (iii) are eligible for a second round of Pioneer Status for another five (5) years, or ITA for a further (ten) 10 years, where applicable.

(v) Incentives for Commercialisation of Public Sector R&D

To encourage commercialisation of resource-based R&D findings of public research institutes, the following incentives are given:

- A company that invests in its subsidiary company engaged in the commercialisation of the R&D findings is eligible for a tax deduction equivalent to the amount of investment made in the subsidiary company; and
- The subsidiary company that undertakes the commercialisation of the R&D findings is eligible for Pioneer Status with income tax exemption of 100% of statutory income for ten (10) years.

Eligible Applicant:

- Investing Company (Holding Company)
 - a. company incorporated under the Companies Act, 2016 and resident in Malaysia; and
 - b. locally-owned company with at least 70% Malaysian equity ownership and owns at least 70% of the equity of the company that undertakes the commercialisation of the R&D findings.

- Company Undertaking the Commercialisation Project a. A company incorporated under the Companies Act, 2016; and b. A locally-owned company with at least 70% Malaysian equity ownership.

Applications for tax incentives listed in 6.1 should be submitted to MIDA.

6.2 Additional Incentives for Research and Development

(i) Double Deduction for Research and Development

- A company can enjoy a double deduction on its revenue (non-capital) expenditure for research which is directly undertaken and approved by the Minister of Finance;
- Double deduction can also be claimed for cash contributions or donations to approved research institutes, and payments for the use of the services of approved research institutes, approved research companies, R&D companies or contract R&D companies;
- Approved R&D expenditure incurred during the tax relief period for companies granted Pioneer Status can be accumulated and deducted after the tax relief period; and
- Expenditure on R&D activities undertaken overseas, including the training of Malaysian staff, will be considered for double deduction on a case-by-case basis.

Claims should be submitted to Inland Revenue Board (IRB).

(ii) Incentives for Researchers to Commercialise Research Findings

Researchers who undertake research focused on value creation will be given a 50% tax exemption for five (5) years on the income that they received from the commercialisation of their research findings. The undertaking has to be verified by MESTECC

Claims should be submitted to Inland Revenue Board (IRB).

6.3 Other Incentives

(i) Industrial Building Allowance (IBA)

- An Industrial Building Allowance (IBA) is granted to companies incurring capital expenditure on the construction or purchase of a building that is used for R&D purpose.
- Such company is eligible for an initial allowance of 10% and an annual allowance of 3%. As such the expenditure can be written off in 30 years.
- Claims should be submitted to Inland Revenue Board (IRB).

(ii) Exemption from Import Duty on Machinery / Equipment / Samples / Materials and Components

- It is the policy of the government not to impose taxes on machinery / equipment / samples / materials and components used directly in the R&D activities and not produced locally. Most categories of machinery and equipment are therefore, not subject to import duties. In cases where the imported goods are taxable but are not available locally, full exemption is given on import duty.
- Applications should be submitted to MIDA.

TABLE 1: RESEARCH AND PRIORITY AREAS

| NO. RESEARCH AREAS | PRIORITY AREAS | |
|--|----------------|--|
| 1. ENGINEERING SCIENCES | 1 | Cutting tool technology |
| | 2 | Design for manufacturing and Assembly |
| | 3 | Flexible Manufacturing Systems |
| | 4 | Metrology SN: Including Instrumentation Manufacturing such as Metrological Instrument |
| | 5 | Machining |
| | 6 | Laser machining |
| | 7 | Rapid prototyping and tooling |
| | 8 | Robotics and Mechatronics |
| 2. ADVANCED MATERIALS SCIENCES CHEMICAL SCIENCES ENGINEERING SCIENCES | 1 | Biosensors |
| | 2 | Building and Construction Materials |
| | 3 | Fine Chemicals |
| | 4 | Green material |
| | 5 | Medical devices |
| | 6 | Microsphere technology |
| | 7 | Nano Materials |
| | 8 | Nano particle |
| | 9 | Nano photonic |
| | 10 | Nanoelectronics |
| | 11 | Nanotube |
| | 12 | Other Nanotechnology |
| | 13 | Quantum device |
| | 14 | Smart Materials |

TABLE 1: RESEARCH AND PRIORITY AREAS

| NO. RESEARCH AREAS | PRIORITY AREAS | |
|--|----------------|---|
| 3. ENGINEERING SCIENCES PHYSICAL AND MATHEMATICAL SCIENCES | 1 | Accelerator technology |
| | 2 | Ionising Radiation Technology |
| | 3 | Non-Destructive Testing |
| | 4 | Non-Ionising Radiation Technology |
| | 5 | Radiation Technology |
| | 6 | Reactor Technology |
| 4. LIFE SCIENCES AGRICULTURE SCIENCES ENGINEERING SCIENCES | 1 | Animal Biotechnology |
| | 2 | Animal Reproduction Biotechnology |
| | 3 | Biofeed |
| | 4 | Bioinformatics |
| | 5 | Bioprocessing |
| | 6 | Biosafety (Food) |
| | 7 | Cell Culture Technology |
| | 8 | Diagnostic Kits |
| | 9 | Enzyme Technology |
| | 10 | Feed and Nutrition |
| | 11 | Fermentation |
| | 12 | Functional Food |
| | 13 | Genomics |
| | 14 | Livestock Reproduction |
| | 15 | Microbial technology |
| | 16 | Product Recovery |
| | 17 | Risk Assessment |
| | 18 | Risk Management |
| | 19 | Transgenic Plant: Rice, Papaya, Banana and Pineapple, Grain Maize |
| | 20 | Vaccine Development |
| 5. LIFE SCIENCES AGRICULTURE SCIENCES ENGINEERING SCIENCES | 1 | Biopharmaceuticals |
| | 2 | Obesity |
| | 3 | Nutraceuticals |

TABLE 1: RESEARCH AND PRIORITY AREAS

| NO. RESEARCH AREAS | PRIORITY AREAS | |
|--|----------------|-----------------------------------|
| | 4 | Drug Discovery |
| | 5 | Oncology |
| | 6 | Endocrinology |
| | 7 | Therapeutics |
| | 8 | Cardiology |
| | 9 | Respiratory Diseases |
| | 10 | Infectious/Communicable Diseases |
| | 11 | Gastroenterology |
| 6. MEDICAL AND HEALTH SCIENCES | 1 | Biopharmaceuticals |
| | 2 | Obesity |
| | 3 | Nutraceuticals |
| | 4 | Drug Discovery |
| | 5 | Oncology |
| | 6 | Endocrinology |
| | 7 | Therapeutics |
| | 8 | Cardiology |
| | 9 | Respiratory Diseases |
| | 10 | Infectious/Communicable Diseases |
| | 11 | Gastroenterology |
| 7. LIFE SCIENCES AGRICULTURE SCIENCES ENGINEERING SCIENCES | 1 | Animal Biotechnology |
| | 2 | Animal Reproduction Biotechnology |
| | 3 | Biofeed |
| | 4 | Bioinformatics |
| | 5 | Bioprocessing |
| | 6 | Biosafety (Food) |
| | 7 | Cell Culture Technology |

TABLE 1: RESEARCH AND PRIORITY AREAS

| NO. RESEARCH AREAS | PRIORITY AREAS | |
|--------------------------------|---------------------|---|
| | 8 | Diagnostic Kits |
| | 9 | Enzyme Technology |
| | 10 | Feed and Nutrition |
| | 11 | Fermentation |
| | 12 | Functional Food |
| | 13 | Genomics |
| | 14 | Livestock Reproduction |
| | 15 | Microbial technology |
| | 16 | Product Recovery |
| | 17 | Risk Assessment |
| | 18 | Risk Management |
| | 19 | Transgenic Plant: Rice, Papaya, Banana and Pineapple, Grain Maize |
| 20 | Vaccine Development | |
| 8. MEDICAL AND HEALTH SCIENCES | 1 | Biopharmaceuticals |
| | 2 | Obesity |
| | 3 | Nutraceuticals |
| | 4 | Drug Discovery |
| | 5 | Oncology |
| | 6 | Endocrinology |
| | 7 | Therapeutics |
| | 8 | Cardiology |
| | 9 | Respiratory Diseases |
| | 10 | Infectious/Communicable Diseases |
| | 11 | Gastroenterology |

TABLE 1: RESEARCH AND PRIORITY AREAS

| NO. RESEARCH AREAS | PRIORITY AREAS | |
|--|----------------|---|
| 9. ENVIRONMENTAL SCIENCES/ ENGINEERING SCIENCES | 1 | Bio-Gas and Bio-Fuel |
| | 2 | Biomass Energy Technology e.g. Refuse-derived Fuel (RDF) |
| | 3 | Climatology |
| | 4 | Coastal Oceanography and Processes |
| | 5 | Disaster Management |
| | 6 | El Nino Southern Oscillation (ENSO) |
| | 7 | Fisheries Oceanography |
| | 8 | Hydro Power Technology |
| | 9 | Hydroinformatics/and Oceanographic Data Management |
| | 10 | Land-Sea Interactions and Processes/Ocean-atmosphere interaction |
| | 11 | Marine Biodiversity, Conservation and Management |
| | 12 | Marine Ecology |
| | 13 | Marine Geology |
| | 14 | Marine Pollution |
| | 15 | Marine Products Biotechnology |
| | 16 | Meteorological Oceanography/Natural marine hazards |
| | 17 | Meteorology |
| | 18 | Monsoon System |
| | 19 | Oceanography Instrumentation |
| | 20 | Other Advancement of Marine Sciences Knowledge/ Alternative energy Sources from the sea |
| | 21 | Sea Level Changes |
| | 22 | Seismology/Earthquake |
| | 23 | Solar Energy Technology |
| | 24 | Storm Water Management |
| | 25 | Tsunami |
| | 26 | Water Resources management (Technology development for supplying clean water for rural communities) |
| | 27 | Wind |

TABLE 1: RESEARCH AND PRIORITY AREAS

| NO. RESEARCH AREAS | PRIORITY AREAS | |
|--|----------------|---|
| 10. ENGINEERING SCIENCES COMPUTER SCIENCES & ICT | 1 | Advance and Emerging Methods SN: Forecasting |
| | 2 | Antenna Technology (mitigation) |
| | 3 | Biometrics Security System |
| PHYSICAL AND MATHEMATICAL SCIENCES | 4 | Broadband Communication |
| | 5 | Cloud Computing |
| | 6 | Digital Image processing System (Pattern Recognition UAV platform development) |
| | 7 | Digital Signal Processing |
| | 8 | Earth Observation System/Ground and Space Station |
| | 9 | Equipment SN/RFID |
| | 10 | Firewalls |
| | 11 | Grid Computing |
| | 12 | Intrusion Prevention System |
| | 13 | Malware, Worms and Viruses |
| | 14 | Micro Electro Mechanical System (MEMS) |
| | 15 | Mobile Network Technologies |
| | 16 | Other Communications n.e.c. SN: Secured Communication System |
| | 17 | Pattern Recognition and Image Recognition/ Imaging Processing and Computer Vision |
| | 18 | Processor Design, Geographic Information System |
| | 19 | Quantum Computing |
| | 20 | Radio Frequency Design (RF) Front-End |
| | 21 | Remote sensing and related technology |
| | 22 | Rockey |
| | 23 | Safety Critical Software |
| | 24 | Satellite and Spacecraft System |
| | 25 | Satellite Communication Services (Bus) |
| | 26 | Security Protocols |
| | 27 | Security Services SN: Network Security |
| | 28 | Semantic technology |
| | 29 | Space sciences especially on Microgravity experiments Astronomy & Astrophysics |
| | 30 | Wireless Devices/Wireless Communication and Technologies |

TABLE 1: RESEARCH AND PRIORITY AREAS

| NO. RESEARCH AREAS | PRIORITY AREAS | |
|------------------------------------|-----------------------|--------------------------|
| 11. SOCIAL SCIENCES AND HUMANITIES | 1 | Community Development |
| | 2 | Environmental Economics |
| | 3 | Gender Studies |
| | 4 | Gerontology |
| | 5 | Policy studies |
| | 6 | Tourism Studies |
| | 7 | Transportation Economics |



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