



*Championing Scientific Discovery,  
Transforming Innovation*

# **R&D FUNDING OPPORTUNITIES**

**MINISTRY OF SCIENCE, TECHNOLOGY AND INNOVATION**

<http://www.mosti.gov.my>



# Goals

## KNOWLEDGE-BASED ECONOMY

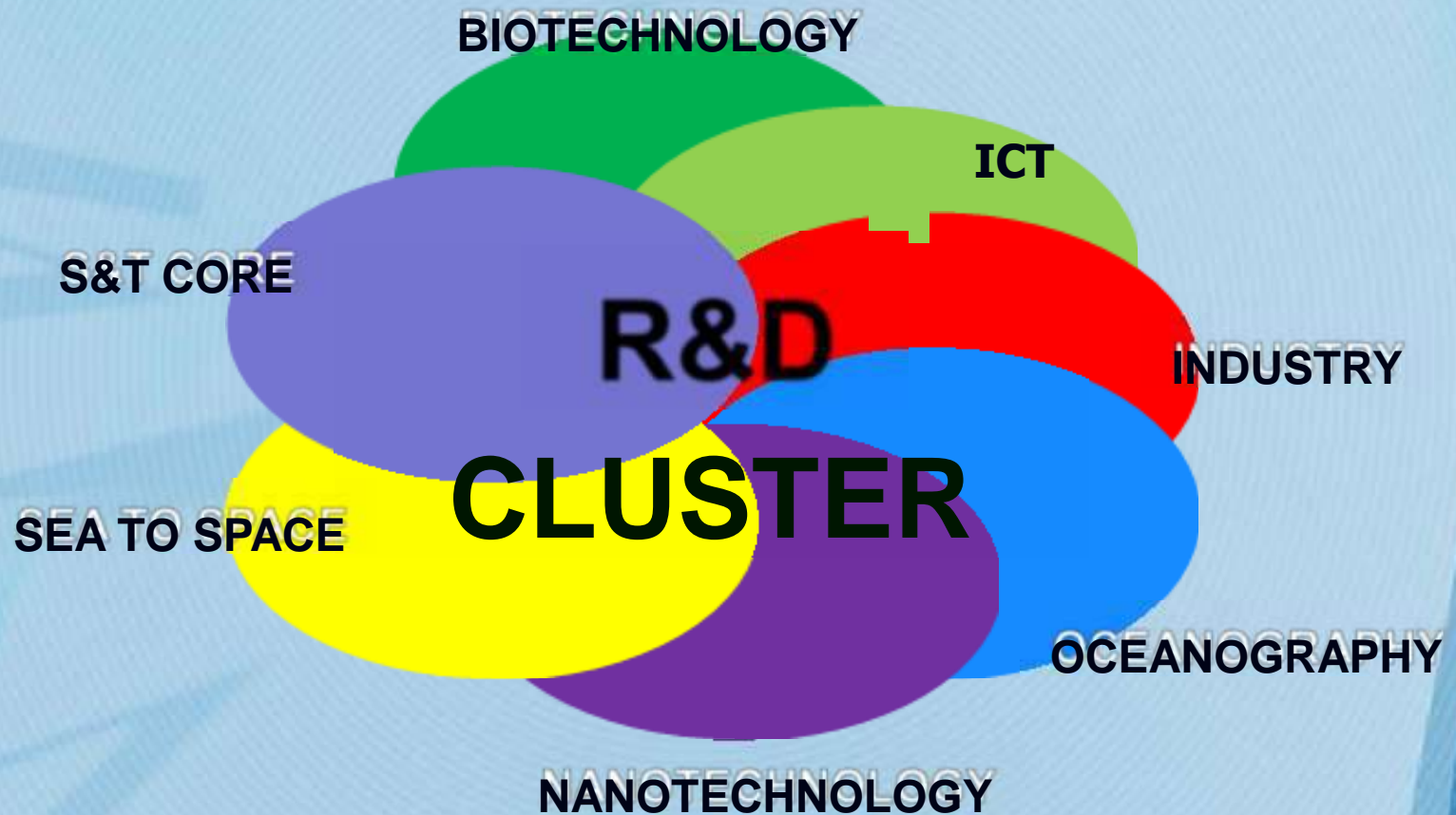
**Knowledge  
Generation**

**Wealth  
Creation**

**Societal Well  
Being**

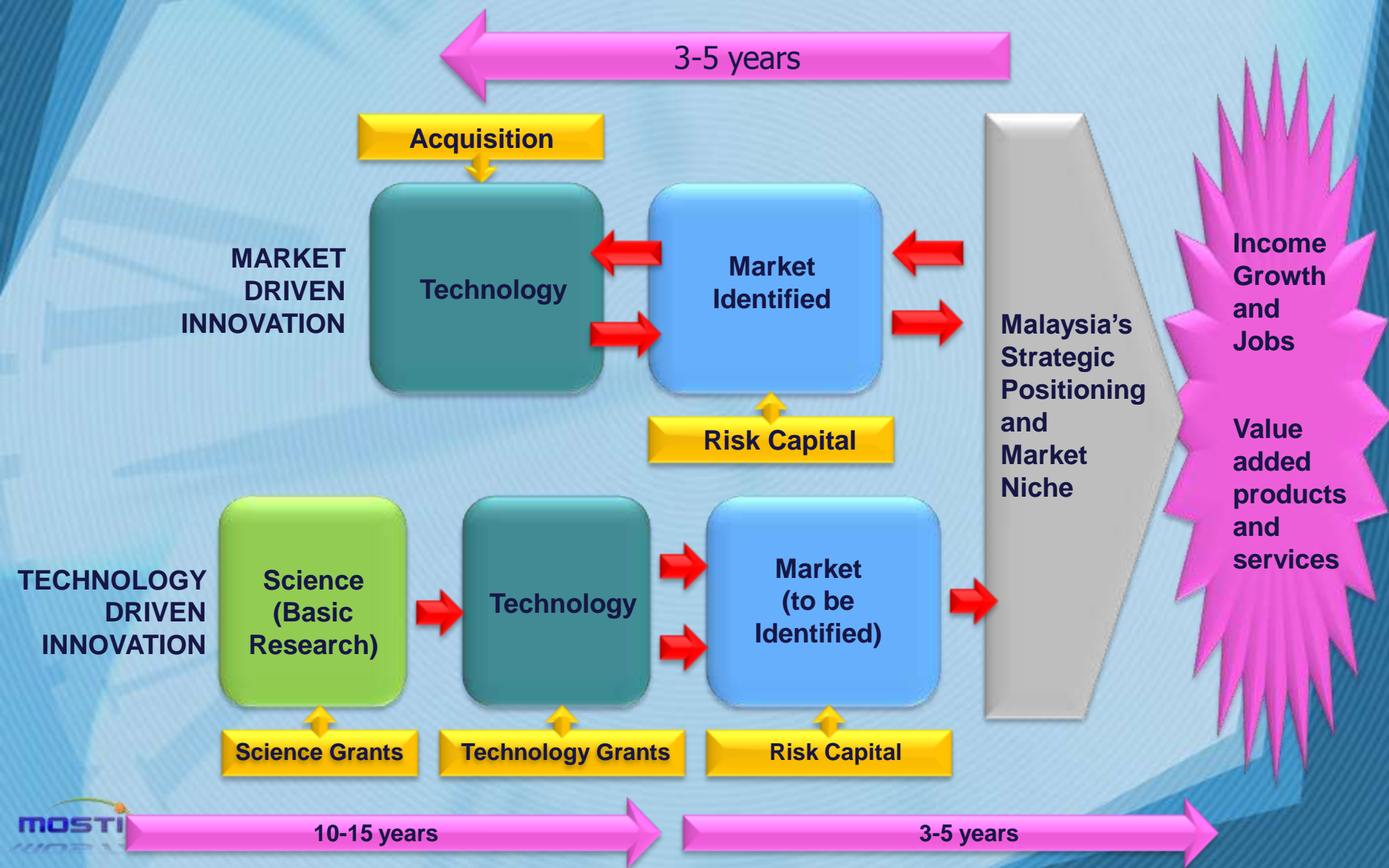
**Pivoting Science &  
Technology to Innovation**

# CLUSTER





# Innovation Model for Wealth Creation and Societal Well Being



# **Vision 2020**

**a national vision of creating a  
developed nation in our own mould**

**“The challenge of establishing a scientific  
and progressive society, a society that is  
innovative and forward looking, one that is  
not only a consumer of technology but  
also a contributor to the scientific and  
technological civilization”**

# MOSTI R,D&C



# Evolution of MOSTI R&D&C Fund

R&D Fund Disbursed  
Directly from Treasury to  
IHLs/RIs

R&D Fund  
Managed by  
MOSTE

R&D&C Fund  
Managed by  
MOSTI

5<sup>th</sup> MP

6<sup>th</sup> MP

7<sup>th</sup> MP

8<sup>th</sup> MP

9<sup>th</sup> MP

## OBJECTIVE

5<sup>th</sup> & 6<sup>th</sup> MP

- Enhance socio-economic development
- Strengthen Capacity & Capability Building

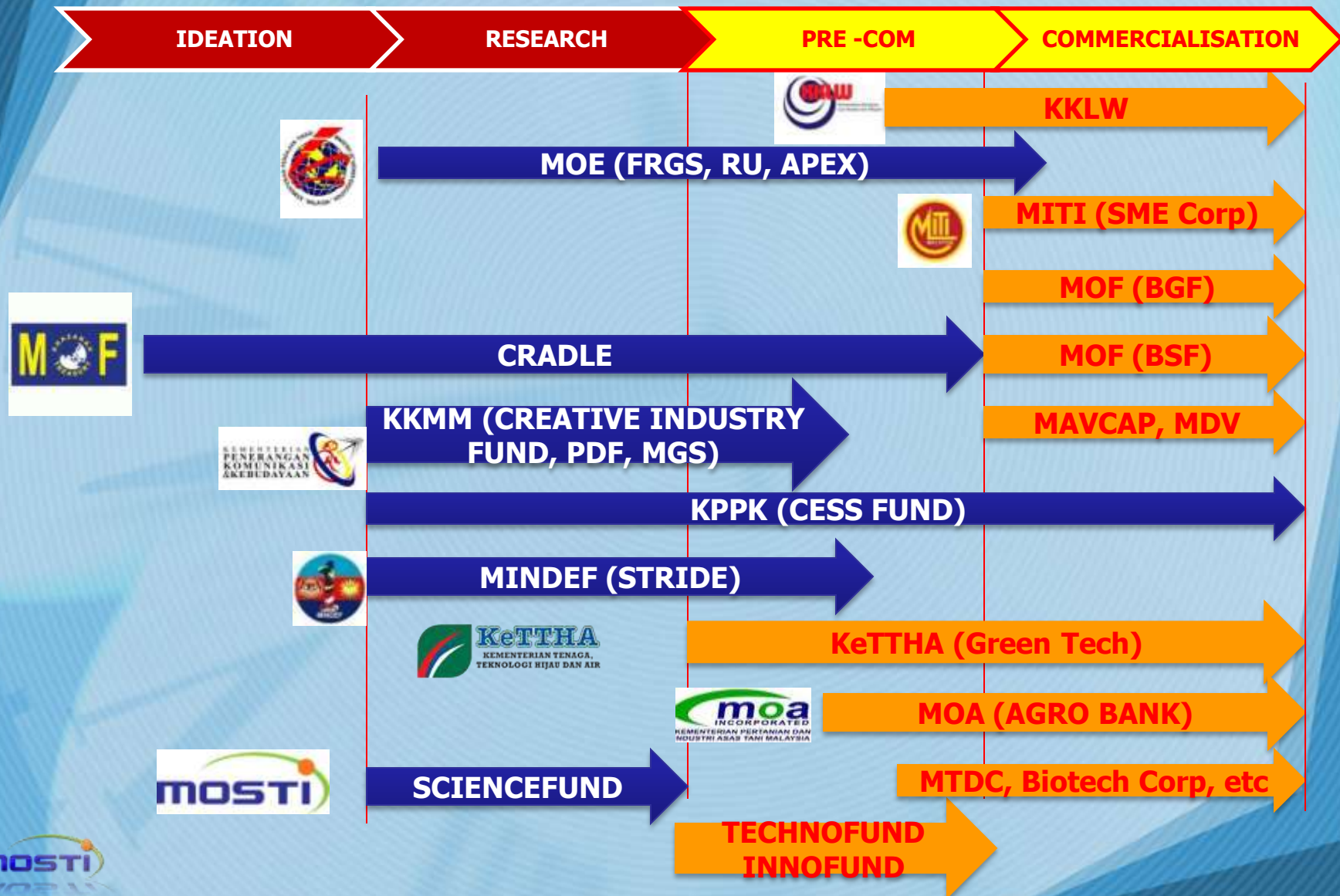
7<sup>th</sup> & 8<sup>th</sup> MP

- Enhance socio-economic development
- Strengthen Capacity & Capability Building
- Accelerate Commercialization

9<sup>th</sup> MP

- Re-prioritise areas of Research to be more focused on Agriculture, Biotechnology, ICT, Advanced Material and Industry;
- Strengthening industrial commitment;
- Accelerate the commercialization of R&D outputs; and,
- Competitive bidding for prioritized projects

# FUNDING FOR R,D&C IN 10<sup>th</sup> MP



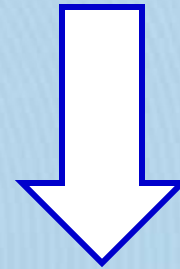
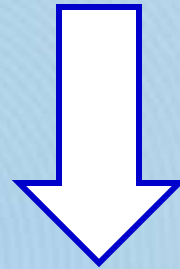
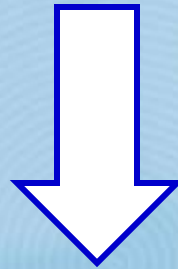
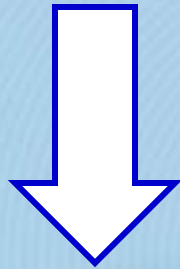
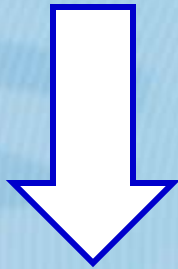


# 10<sup>th</sup> MP MOSTI R,D&C Priority Areas

**MOSTI R,D&C FUNDING**



**BIOTECHNOLOGY S2S ICT INDUSTRY S&T CORE**



**ENGINEERING  
SCIENCES**

**CHEMICAL  
SCIENCES**

**ENVIRONM.  
SCIENCES**

**AGRICULTURE  
SCIENCES**

**COMPUTER  
SCIENCES & ICT**

**LIFE  
SCIENCES**

**PHYSICAL &  
MATHEMATICAL  
SCIENCES**

**ADVANCED  
MATERIALS  
SCIENCES**

**SOCIAL  
SCIENCES &  
HUMANITIES**

**MEDICAL &  
HEALTH  
SCIENCES**

**BIODIVERSITY**

**CYBERSECURITY**

**ENERGY  
SECURITY**

**FOOD  
SECURITY**

**WATER  
SECURITY**

**FLAGSHIP  
PROGRAMMES  
UNDER NSRC**

**TRANSPORT &  
URBANISATION**

**MEDICAL &  
HEALTHCARE**

**ENVIRONMENT &  
CLIMATE CHANGE**

**PLANTATION CROPS &  
COMMODITIES**

## SUMMARY OF APPROVED PROJECTS RELATED TO WATER

MP	No. of Projects Approved	Total Amount Approved (RM)
9MP	128	67,865,733.75
10MP	52	15,659,268.00
<b>Total</b>	<b>180</b>	<b>83,525,001.75</b>



# SCIENCEFUND

## Summary of Approved Projects Related to WATER

MP	Year Approved	No. of Projects Approved	Total Amount Approved (RM)
9MP	2006	45	8,343,766
	2007	43	8,585,614
	2008	15	2,998,700
	2010	2	302,500
	2009	6	1,129,650
<b>Total</b>		<b>111</b>	<b>21,360,230</b>
10MP	2012	21	4,253,716
	2013	16	3,319,171
	2014	4	794,960
	2011	7	1,270,071
<b>Total</b>		<b>48</b>	<b>9,637,918</b>
<b>Grand Total</b>		<b>159</b>	<b>30,998,148</b>

## **TECHNOFUND**

### **Summary of Approved Projects Related to WATER**

<b>MP</b>	<b>No. of Projects Approved</b>	<b>Total Amount Approved (RM)</b>
9MP	14	43,088,038
10MP	3	5,860,100
<b>Total</b>	<b>17</b>	<b>48,948,138</b>

## INNOFUND

### Summary of Approved Projects Related to WATER

MP	No. of Projects Approved	Total Amount Approved (RM)
9MP	3	3,417,465.75
10MP	1	161,250.00
<b>Total</b>	<b>4</b>	<b>3,578,715.75</b>



# SCIENCEFUND

# SCIENCEFUND

**Grant provided by Government to carry out R&D projects that can contribute to the discovery of new ideas and the advancement of knowledge in applied sciences, focusing on high impact and innovative research**

## **ELIGIBLE RECIPIENTS**

- ❖ **Research Institutions (RIs) and Institutions of Higher Learning (IHLs) in the public sector;**
- ❖ **IHLs and RIs in the private sector, subject to approval by MOSTI.**
- ❖ **Government Science, Technology and Innovation (STI) Agencies.**

**PROJECT DURATION : 30 months maximum**  
**QUANTUM : RM500,000.00 maximum**

# Objectives of ScienceFund

- i. to support research that can lead to the innovation of products or processes for further development and commercialisation; and/or;
- ii. to generate new scientific knowledge and strengthen national research capacity and capability.



# Selection Criteria of the Project

- i) **Scientific and technical merit:** The project must be scientifically sound, technically feasible with achievable milestones, and has the **potential for further development and commercialisation.**
- ii) **Research competence:** The research team must have the knowledge and **competency to carry out** the research successfully to completion.
- iii) **Innovativeness** of the research.
- iv) **High impact research:** Clear and **measureable expected output**, outcome and **impact in line** with National Key Economic Areas / National Key Result Areas (NKEA/NKRA).

# **Evaluation / Selection Criteria**

# Evaluation / Selection Criteria

## 1. Research

- must be a research proposal, NOT just development
- must be applied research, NOT fundamental research



## 2. Novelty

- the research proposal must be novel
- may lead to the generation of new IP, such as filing of a patent:  
*Newness, inventive step and industrial application*
- identify the patentability aspect of the research proposal, if any
- prior art search must be done to ensure the originality of the proposal
- Patent incentives tell it all !

## 3. Viability of Research Objectives

- must be specific and measurable

*e.g. the objective of the project is to develop a thin-film solar cell for micro energy harvester. The expected harvested power level is  $10 \mu\text{W}/\text{cm}^2$*

- must be technically feasible

## 4. Output Expected

- Prototype, patents, new/ improved process, new method/ technique
- must reflect the output of an applied research with potential industrial applications  
*e.g. solar-based energy harvester for microelectronic devices in aquaculture application*



## 5. Collaboration and Industry Linkages

- Collaborators may be crucial in certain projects
- Roles of collaborators must be clearly identified
- Letter of Intent or MOA with collaborators must be submitted

## 6. Appropriateness of Research Methodology

- Elaborate the research methodology in stages/ phases
- give details on the analytical techniques, design, and research activities
- should make an attempt to compare the methodology with alternative methods

## 7. Relevancy of Key Milestones

- categorically quantify the various significant accomplishments of the projects in phases
- the milestone should reflect the various major stages of progress in the project.
- must be at least 2 milestones per calendar year.



## 8. Commercialisation Potential

- the research output **MUST** have the potential for further development and commercialisation.

## 9. Cost Effectiveness

- cost effectiveness of the research outcome / proposed solution.

## 10. Project Risk

- identify the Technical Risk, Financial Risk and Timeline Risk and justify accordingly.
- suggest a risk mitigation plan if the risk is deemed high.



# INNOFUND

What is  
InnoFund

**InnoFund is a fund to promote and enhance innovation through products, processes and systems by which value can be created for customers, businesses and society**

## Types

### **Enterprise Innovation Fund (EIF)**

- ❖ **Individual**
- ❖ **Sole Proprietor**
- ❖ **Micro Enterprises**
- ❖ **Small Enterprises**

- **To encourage Individuals, Micro and Small Enterprises to develop new or improve existing products, process or services with elements of innovation**



## Quantum of Funding and Duration

	<b>Quantum of Funding</b>	<b>Duration</b>
• <b>Sole Proprietor/ Individual</b>	Up to RM50,000	Up to 12 months
• <b>Micro Enterprise</b>	Up to RM500,000	Up to 12 months
• <b>Small Enterprise</b>	Up to RM500,000	Up to 12 months

### **Note:**

1. Micro: Annual sales turnover of less than RM 0.25 million or less than 5 FTE
2. Small: Annual sales turnover of RM 0.25-10 million or less than 50 FTE

## Types

### **Community Innovation Fund (CIF)**



#### **Community Groups**

- **To encourage Community Group to convert knowledge/ idea into innovative products/ process / services that improve the quality of life of communities**

## Quantum of Funding

- **Up to RM500,000**

## Duration

- **12 to 18 months**



# TECHNOFUND

# DEFINITION

TechnoFund is a grant scheme which aims to stimulate the growth and successful innovation of Malaysian enterprises by increasing the level of R&D and its commercialisation. The scheme provides funding for technology development, up to pre-commercialisation stage, with the commercial potential to create new businesses and generate economic wealth for the nation.

# **WHO CAN APPLY**

- i. Small and Medium Enterprises;**
- ii. Institutions of Higher Learning;**
- iii. Research Institutes; and**
- iv. Science, Technology and Innovation (STI) Agencies.**



# OBJECTIVES

- i. development of new or cutting edge technologies or further develop/value add existing technologies/products in specific areas;
- ii. undertake market driven R&D towards commercialisation of R&D outputs;
- iii. encourage institutions, local companies and inventors to capitalise their intellectual work through intellectual property (IP) registration; and
- iv. stimulate the growth and increase capability and capacity of Malaysian technology-based enterprises, Malaysian Government Research Institutes (GRI) and Institutions of Higher Learning (IHL) through both local and international collaborations.

# SCOPE OF FUNDING

The Pre Commercialisation (TechnoFund) will cover:

- i. the acquisition of technology (foreign and/ or local).
- ii. the up-scaling of laboratory-scale prototype or the development of commercial ready prototype; and
- iii. pre-clinical testing/clinical testing/field trials.

## ➔ **QUANTUM OF FUNDING**

**The quantum for each project is up to RM3,000,000.00.**

## ➔ **PROJECT DURATION**

**The project duration is up to 30 months.**

# **SELECTION CRITERIA OF THE PROJECT**

- **Novelty**
- **Technical Feasibility**
- **Laboratory Proof of Concept**
- **Competency of the Project Team**
- **Credibility of Project Proposal**



# **SELECTION CRITERIA OF THE PROJECT**

- **Appropriateness of Methodology**
- **Deliverables**
- **Financial Capabilities**
- **Projection of the Project Cost**
- **Risk**

# **Top Ten Reasons for Rejection**

# **Top Ten Reasons of Rejection**

- 1. No Proof of Concept (POC) and weak of methodology;**
- 2. Business model is not clear;**
- 3. There is no novelty in the technology presented;**
- 4. Weak project team;**
- 5. The project is already successful and in the commercialisation stage;**
- 6. The project proposed is a common technology and has no value added aspect;**
- 7. Project already exist in market;**
- 8. The project is just to assemble commercial components;**
- 9. The main purpose of the project is to buy equipment and provide services. No element of R&D and technology development have been carried out; and**
- 10. Proposal is still in the idea stages only.**



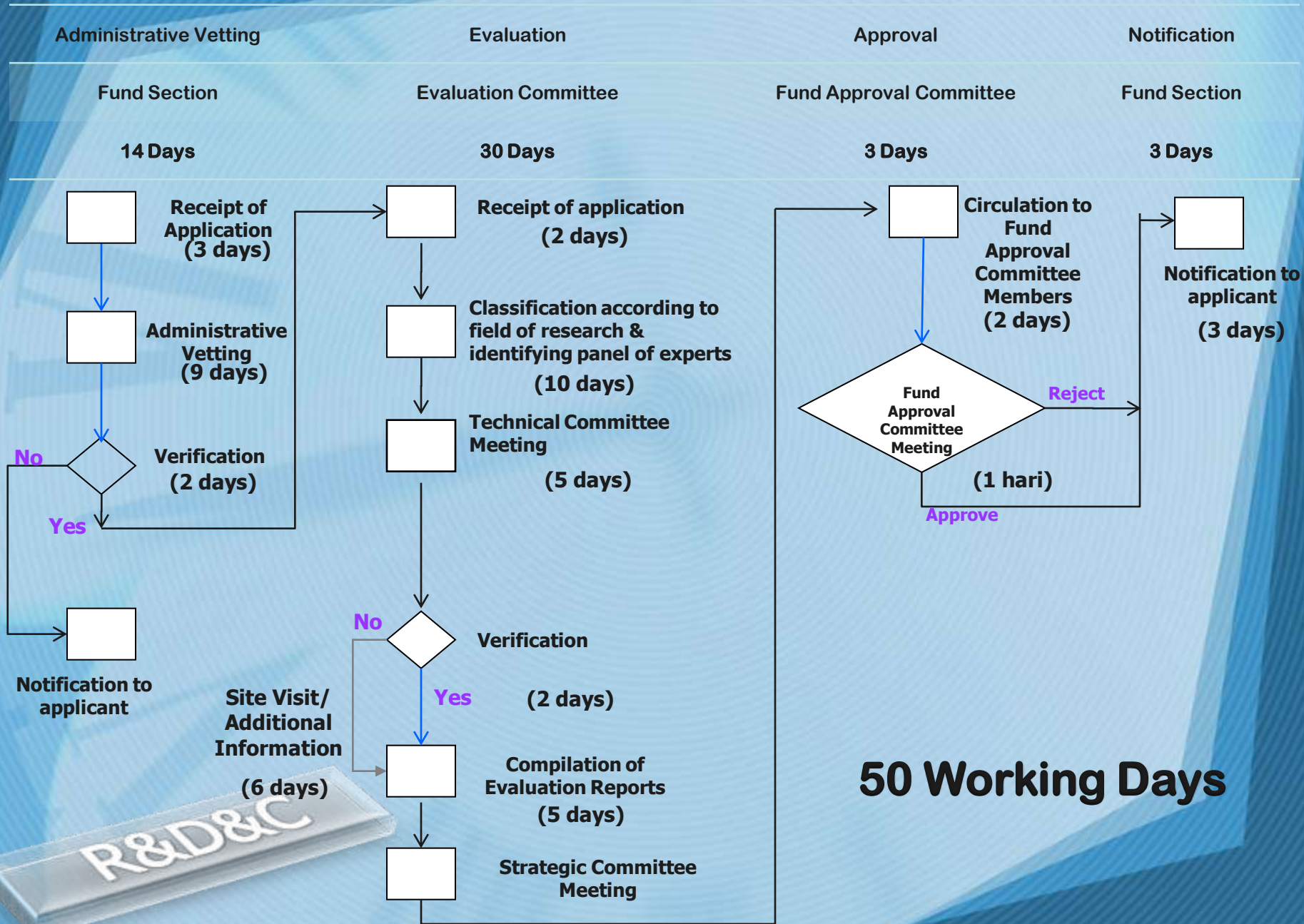
**Beginning December 2011, evaluation will be done in cycles:**

<b>CYCLE</b>	<b>LAST DATE TO SUBMIT APPLICATION</b>	<b>EVALUATION</b>	<b>RESULT</b>	<b>CLIENT CHARTER</b>
<b>4/2013</b>	<b>31 Dec 2013</b>	<b>2 Jan– 14 Mar 2014</b>	<b>17 March 2014</b>	<b>50 working days</b>
<b>1/2014</b>	<b>31 March 2014</b>	<b>1 Apr– 9 June 2014</b>	<b>10 June 2014</b>	<b>50 working days</b>
<b>2/2014</b>	<b>30 June 2014</b>	<b>1 July– 8 Sept 2014</b>	<b>9 Sept 2014</b>	<b>50 working days</b>
<b>3/2014</b>	<b>30 Sept 2014</b>	<b>1 Oct– 9 Dec 2014</b>	<b>10 Dec 2014</b>	<b>50 working days</b>
<b>4/2014</b>	<b>31 Dec 2014</b>	<b>1 Jan – 11 March 2015</b>	<b>12 March 2015</b>	<b>50 working days</b>

# PROCESSING

PROCESSING

# EVALUATION PROCESS





# ACHIEVEMENTS

ENTITY	TITLE	ACHIEVEMENT
<b>GeneFlux Biosciences Sdn. Bhd.</b>	<b>Pre-Commercial Validation of MyDENKit - a Molecular Diagnostic Kit for Dengue Disease Screening and Virus Serotyping</b>	MyDENKit™ - First Malaysian PCR-based dengue detection and serotyping kit. It is a polymerase chain reaction (PCR) based diagnostic and screening kit. The kit is based on a patented technology (IP No: PI20053042) licensed by GeneFlux™ through a Technology Licensing Agreement between University Malaya. The kit differentiates four serotypes of dengue virus by a single reaction. It is available in two different versions, a conventional gel-based RT-PCR kit (MyDENKit) and a real-time version using SYBRGreen Technology (MyDENKit-RT)





ENTITY	TITLE	ACHIEVEMENT
QL Palm Pellet Sdn. Bhd.	Palm Palletising System (PPS)	<p>QLPP progress to construct a pre-commercialisation pilot plant to conduct technology integration and operation testing. QLPP has conducted large-scale, integrated testing and fine-tuning the overall system performance. Throughput is optimised at 4 t/hr (with current set up) for pellet with moisture content around 10% ready to be used as fuel replacement for coal, diesel, etc. QLPP has developed a cost model through pilot testing ready to be used for commercialisation purpose. In addition to the primary objectives, QLPP has also tested on pellet production using oil palm frond (OPF). Pellets produced are of good appearance with moisture content around 20%. After airing under sunlight condition, the pellet moisture content reduced to 11% . OFP pellets are suitable for animal feed. The OFP trial indicated that the palm pellet system has shown technical feasibility in production OFP pellets with further fine tuning.</p>





ENTITY	TITLE	ACHIEVEMENT
WKL Hydraulic Sdn. Bhd.	Development Hydraulic Power Transmission System (HPTS) For Automotive Vehicle.	<p>Projek ini menghasilkan empat (4) unit kenderaan:</p> <ul style="list-style-type: none"> <li>i. kenderaan <i>Hydraulic Power Transmission System (HPTS)</i> kegunaan pertanian</li> <li>ii. 2 kenderaan HPTS Prime Mover kegunaan Pelabuhan</li> <li>iii. 1 kenderaan HPTS pelbagai guna (<i>rescue vehicle</i>)</li> </ul> <p><i>Prime Mover</i> yang dibangunkan dilihat mempunyai potensi besar untuk menembusi pasaran malah telah mendapat perhatian dari Pelabuhan Tanjung Pelepas (PTP) untuk menjalani ujian lapangan di pelabuhannya. Hasil daripada ujian tersebut, kenderaan ini telah menunjukkan prestasi yang cemerlang dengan berjaya melepasi kesemua kriteria yang telah ditetapkan oleh PTP dengan penjimatan minyak sehingga 35% berbanding <i>Prime Mover</i> biasa.</p>

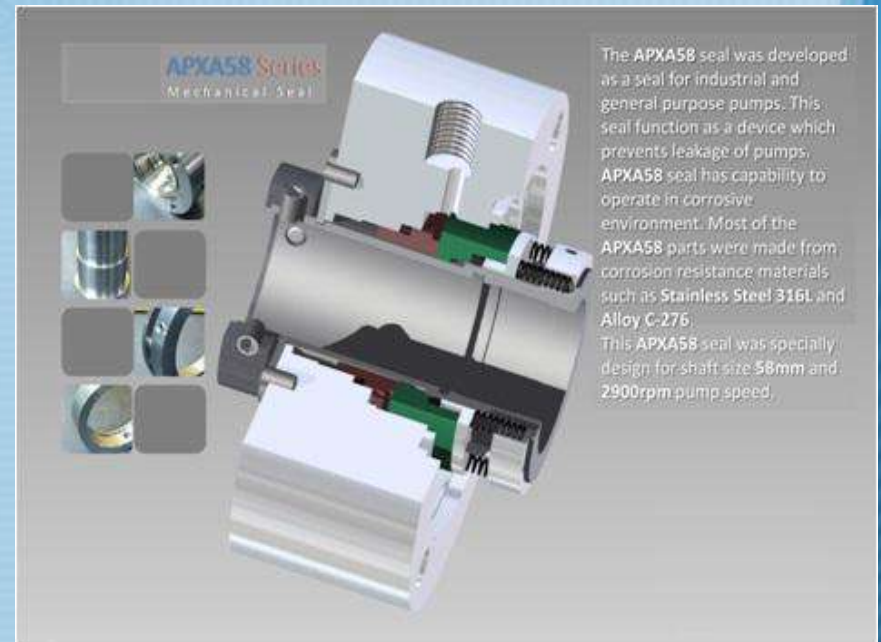


ENTITY	TITLE	ACHIEVEMENT
Sun System Engineering Sdn Bhd	DIN Type Feeder Pillar IEC 60439-1 (2004), 200 Amps and 1600 Amps	Entiti berjaya memperolehi kontrak daripada Tenaga Nasional Berhad bernilai RM5,398,800.00 bagi menggantikan <i>feeder pillar</i> jenis <i>BS Standard</i> kepada jenis DIN.





ENTITY	TITLE	ACHIEVEMENT
ATIQS Sdn Bhd	<i>To Develop a New Innovative Mechanical Seal for Oil &amp; Gas Industry (PETRONAS, SHELL &amp; EXXON MOBIL) in Malaysia</i>	Memperoleh <i>Business Start-up Fund</i> dari Perbadanan Pembangunan Teknologi Malaysia (MTDC) bagi mengkomersialkan produk yang dihasilkan melalui pembiayaan Enterprise InnoFund.

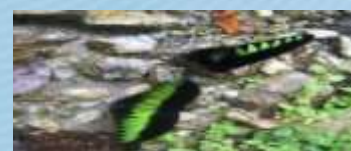




ENTITY	TITLE	ACHIEVEMENT
MVE Technologies Sdn. Bhd.	Research and Development for Choke and Control Valves	Memperoleh <i>Business Start-up Fund</i> dari Perbadanan Pembangunan Teknologi Malaysia (MTDC) bagi mengkomersialkan produk yang dihasilkan melalui pembiayaan Enterprise InnoFund.



ENTITY	TITLE	ACHIEVEMENT
Rangkaian Alam Malaysia (Malaysian Nature Network)	E-Semai : ICT as an Enabler for Promotion of Eco-Tourism Amongst Semai	<ol style="list-style-type: none"> <li>1. Portal E-Semai (<a href="http://www.esemai.org">www.esemai.org</a>) dibangunkan untuk menyediakan aktiviti pembelajaran seperti latihan ICT, Bahasa Inggeris dan latihan aplikasi web supaya komuniti Semai boleh menggunakan portal ini secara efektif.</li> <li>2. Di samping itu, seramai 1,225 pelancong telah melawat Ulu Geroh dari Januari – Disember 2011 hasil daripada maklumat dan promosi yang dibuat menerusi portal ini.</li> <li>3. Jumlah pendapatan yang diperolehi oleh komuniti menerusi aktiviti pemandu pelancong, tempahan penginapan dan lain-lain berjumlah RM26,950.00.</li> </ol>

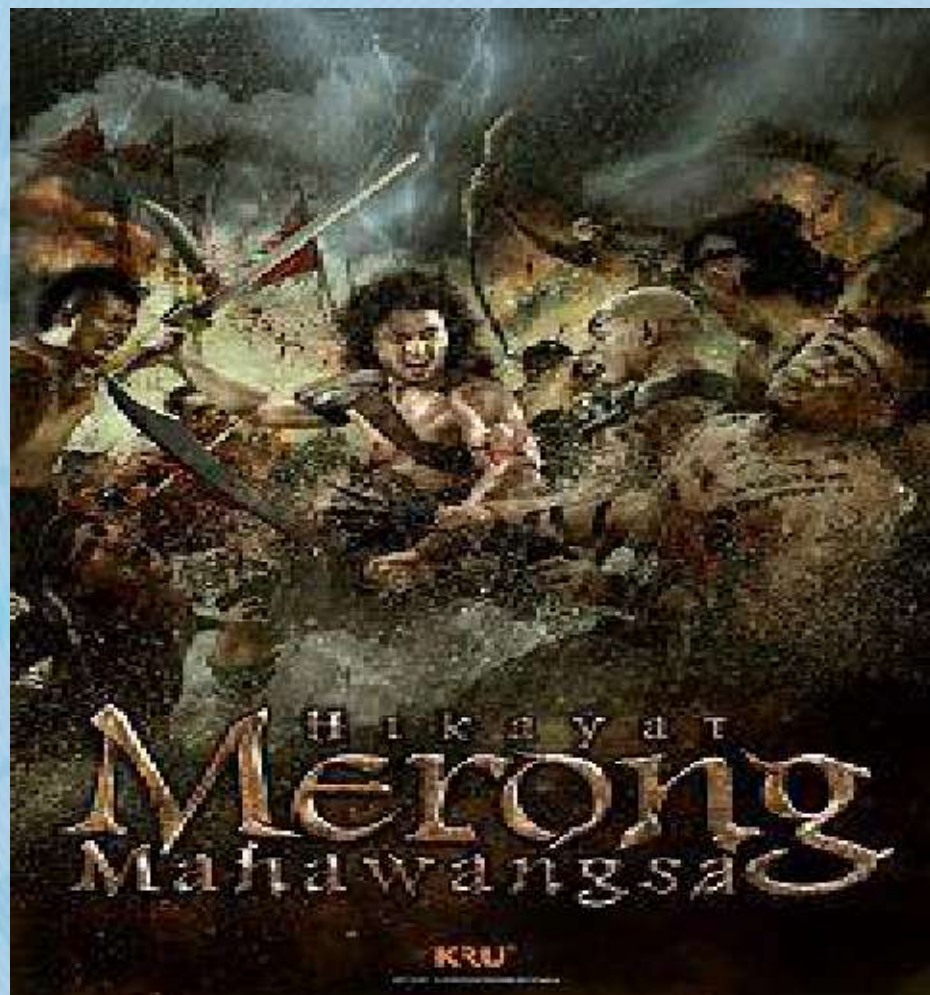




ENTITY	TITLE	ACHIEVEMENT
Persatuan Alumni Dasar Pandang Ke Timur (ALEPS)	Kerusi roda dan Pembuatan Peralatan Sokongan Dalam Rehabilitasi Orang Kurang Upaya melalui kaedah Praktikal Dengan Penyertaan Komuniti Melalui Inisiatif Persatuan Alumni Dasar Pandang Ke Timur	<ul style="list-style-type: none"> <li>Kerusi roda yang <i>customized</i> untuk kanak-kanak OKU dihasilkan dengan harga yang munasabah.</li> <li>Sehingga kini, 550 yang telah diperbaiki mengikut keperluan kanak-kanak berjaya dihasilkan dan diserahkan kepada kanak-kanak OKU.</li> </ul>

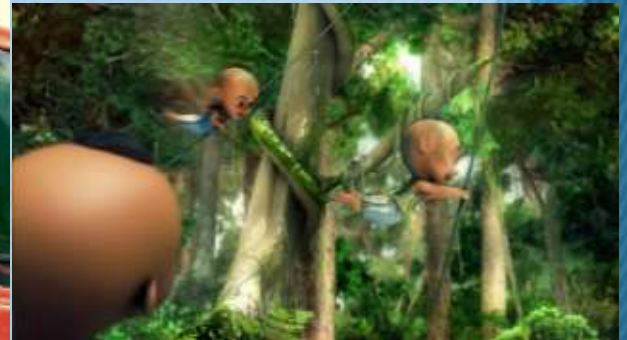








# GENG: THE ADVENTURE BEGINS"



Number of Projects completed	Outputs	Outcomes	Measure
Biopharmacy/ Medical (20 completed projects)	<p>Molecular techniques in cancer</p> <p>New constituents of palm oil for cosmeceuticals</p> <p>Profiling Standard for Essential oil from gaharu</p>	<p>Improve oral and breast cancer treatment</p> <p>Value addedness to palm oil application in pharmaceutical industry</p> <p>Increase quality of essential oil for high market value</p>	<p>Patents Filed: 2</p> <p>Publications: 27</p> <p>Commercialisation:</p> <p>Industrial collaboration with Caroted Bhd (a subsidiary of Hovid)</p> <p>Discussion with Vivantis Technologies &amp; Geneflux Sdn Bhd</p>
Industrial/ Environment (17 completed projects)	<p>Bioprotein from agricultural waste and cheap carbon source</p> <p>New Methods for waste water treatment</p>	<p>Enable new market for agricultural waste</p> <p>Efficient management of waste water</p>	<p>Patents: 8</p> <p>Publications: 31</p>
Agricultural Biotechnology (10 completed projects)	<p>Methods for culturing algae strain as a feed for fish larvae</p>	<p>Increase productivity of fish industry</p>	<p>Publications: 3</p>





Machine developed used for profiling groove for piping in petrochemical industry



Pilot Plant for production of water-soluble polymer for industrial waste treatment



Development of bio-fuel engine for ferry/boat



Development of mobile incinerator



Development of wifi antenna for transmitting information up to 3 km

Key Indicator	Achievements
Completed Projects	147
Potential for Commercialization	3
Patents filed	60
RSE Created	476
Knowledge Worker Generated	135
Employment Created	107
Innovation Output	34
Licensing/Spin-off Company	3



Automation for making "baria"



A photograph of two men, likely astronauts, wearing blue flight suits. They are both smiling and giving a thumbs-up gesture. The man on the left is slightly behind the man on the right. They are standing in front of a blue background with some white structural elements visible on the left.

A group of officials, including Prime Minister Najib Razak, are seated at a long conference table. Najib Razak is in the center, wearing a dark suit and a Malaysian flag tie, speaking into a microphone. To his left is a woman in a purple and white patterned hijab. To his right is a woman in a pink hijab. The table is set with a floral arrangement, water bottles, and a sign that reads "MALAYSIA".

## Integrated Geospatial Database and Planning System (IGDP System)



## InnoYOUTH (Innovative Youth)

Empowering Kajang Prison Inmates (Youths) in Digital Micro- Enterprises is a social project to empower 250 inmates of Kajang Prison in multimedia and desktop publishing skill as to enable them to become microentrepreneurs once they are released. The project aims to give guidance, hope, skills and confidence for the inmates to start afresh a new lease of life - using ICT skills to earn a living. InnoYouth project will provide hope and instil sense of self-respect for the inmates and help to reduce 're-offending' cases. 250 inmates are being selected for this project comprising mainly youths aged between 19-39 years old. ICT will be used as a creative tool to prepare, train and enhance the target group's ability to offer niche services in multimedia and desktop publishing.

**Project Location : Kajang Prison, Selangor**





# GUIDELINES AND APPLICATION FORMS????

**Please visit our website:**

**<http://www.mosti.gov.my>**

**[suhaimi@mosti.gov.my](mailto:suhaimi@mosti.gov.my)**

**019-3805707**

# THANK YOU