



# GRASSROOTS INNOVATIONS

# MALAYSIA INNOVATION FOUNDATION

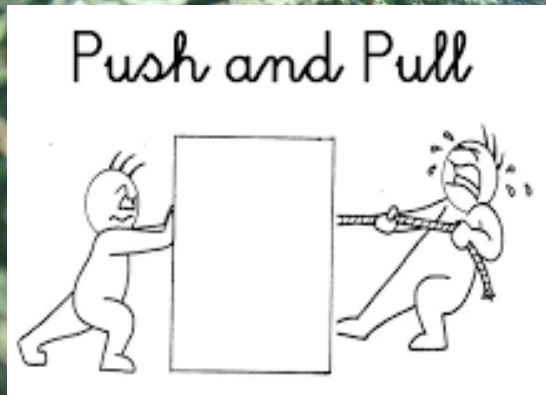
Yayasan Inovasi Malaysia (YIM)

2019 AND BEYOND

Updated June 3, 2019



# ISSUES AND CHALLENGES



Push and Pull  
Factor



Ecosystem



Support



Development  
and  
Advancement



# BEYOND





**“ We believe in empowering creativity and innovation by developing innovative mindsets and turning ideas into reality. We nurture a sustainable support system that results in economic benefits. ”**



Identify, scout & support the development of potential grassroots innovations

Encourage more Malaysian to embrace grassroots innovations

Promote and inculcate innovation & creativity among grassroots



# WHAT WE OFFER



Technology Facilitation  
and  
Business Innovation



Knowledge and Resource  
Management



Community Innovation



## VISION

Driving **INNOVATION** and **CREATIVITY** amongst Malaysians; targeting Children, Youth, Women, Disabled People, Rural Communities and Non-government Organizations (NGOs).

## MISSION

To Develop and Promote **Creative Skills** in the field of **Science and Technology** in Academia, Industry and Society.

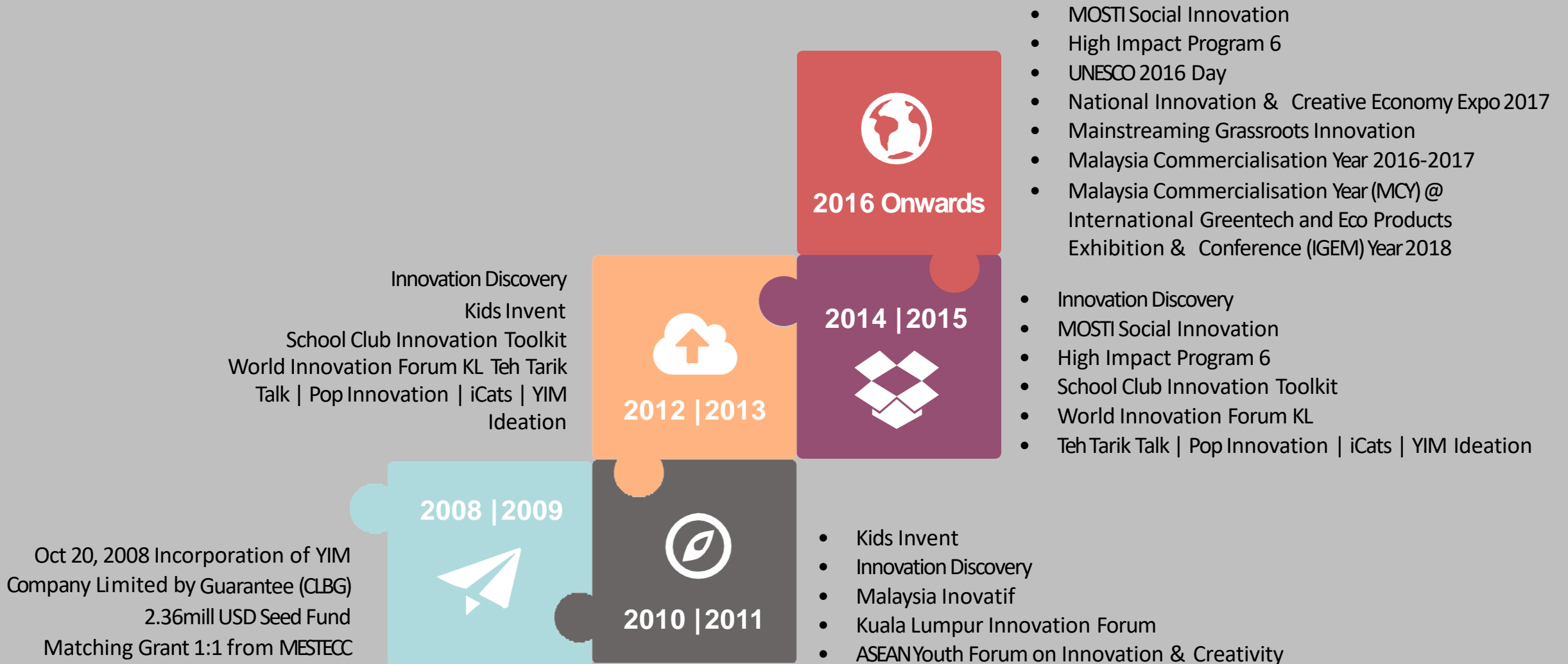
INCLUSIVE  
INNOVATION





# OUR JOURNEY

## Milestone & Achievements





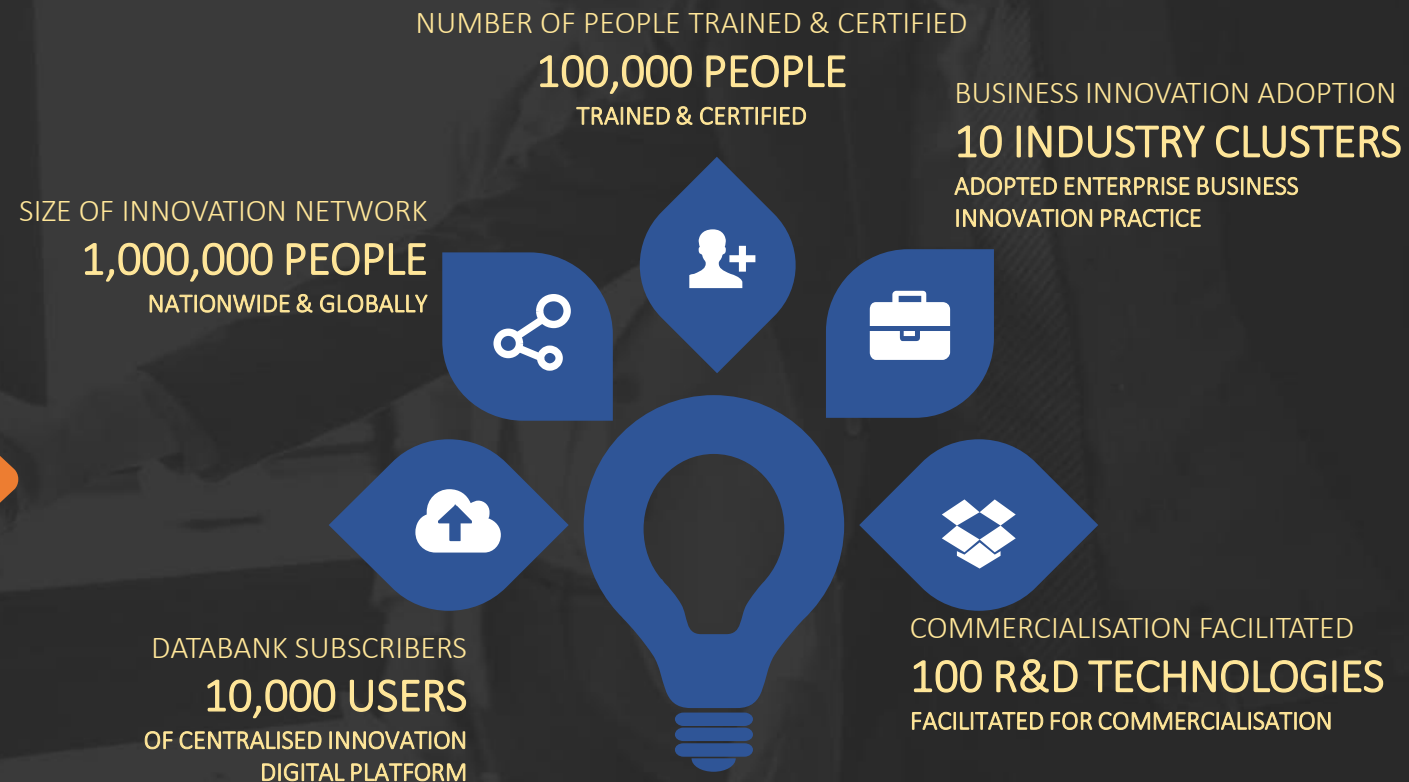
# STRATEGIC DIRECTION

Translating Innovation to Wealth

## STRATEGIC THRUST



## GOALS (2017-2025)





**Grassroots innovations are innovative product or process created at the bottom of the pyramid (B40), usually due to necessity, hardship and challenges.**

**(Mohd Faiz Hilmi, (2012) Grassroots Innovation from the Bottom of the Pyramid, pg 2)**



# EQUIVALENT AGENCIES

With Similar Functions



## Malaysia Innovation Foundation

### Incorporation

2008 by the Malaysian Government

### Functions

Driving INNOVATION and CREATIVITY amongst Malaysians; targeting Children, Youth, Women, Disabled People, Rural Communities and Non-government Organizations.

Developing and Promote Creative Skills in the field of Science and Technology in Academia, Industry and Society.

### Funding Model

Supported by Government



## Gujarat Grassroots Innovation Augmentation Network

1997 by the Government of Gujarat

Incubating and commercialising grassroots innovations.

Scaling up and spawning grassroots innovations and help development and facilitation of successful enterprises

Supported by Government



## Society for Research and Initiatives for Sustainable Technologies and Institution

N/A

Strengthening the creativity of / at / for grassroots communities, including individual innovators and ecopreneurs in the area of conserving biodiversity and developing eco-friendly solutions.

Supported by Government



## S

### STRENGTHS

- The ONLY Organization Mandated by the Government on Grassroots Innovations
- YIM as Smart Partner enabling any agency with Grassroots and B40 Innovation Agenda

## W

### WEAKNESSES

- Dependencies on Funding for Annual OPEX of RM2 million
- Dependencies on External Innovation Expert for Product Development & Commercialization

## O

### OPPORTUNITIES

- Proactively Tapping on Existing & New Grassroots Agendas of Partner Agencies (Refer Appendix List of MOU's)
- Strengthening Internal Innovation Expertise Facilitation Capacity

## T

### THREATS

- The Potential of other similar CLBG under MESTECC (or other ministries) undertaking the mandated roles of YIM
- Operational issues – staffing, rental, maintenance, emolument





# INITIATIVES

Programs under YIM  
(2015 – 2018)



## HIGH IMPACT PROGRAM 6 (HIP 6) -INCLUSIVE INNOVATION

- Identified 1,786 innovations
- Shortlisted 591 innovations
- Admitted 68 innovations
- Commercialised 27 innovations
- Filed 21 IPs



## MAINSTREAMING GRASSROOTS INNOVATIONS (MaGRIs)

- Identified 737 innovations
- Selected 15 innovations
- Commercialised 7 innovations



## MOSTI SOCIAL INNOVATIONS (MSI)

- 30 Completed projects



# **HIGH IMPACT PROGRAM 6 (HIP6)**

REDUCING INEQUALITY



# HIP 6 of SME Masterplan will empower 40% BOP

## CONTEXT

- Promote rural transformation
- Improve business environment for SMEs especially in rural areas
- Increase the innovation pool

### *Inclusive Innovation Programme*



Technical + Mgmt. Advisory

Support Facilities

Linkage - Financing

Promotional Support

Incentives

*Innovation targeted at masses*  
(e.g. M-payment)



*Innovation from grassroots*  
(e.g. cycle powered machine, low cost tablet)

**Commercialized Products & Services to mass markets (incl. Govt. procurement)**

## HIP6

### DEVELOPMENT SCOPE

**Grant assistance** with maximum of 47,880.00 USD for each innovators/SMEs for: -

- Intellectual property protection including prior art search
- Concept design
- Prototype development
- Production prototype
- Testing and Validation
- Regulatory (Certification)

**Support assistance:**

- Market intelligence and community profiling
- Pilot project at the community
- Education and training for diffusion of innovation at the community
- Market access and innovation alignment through introduction of products
- Outsourced services in legal work and other specific expertise



# INNOVATOR BUSINESS MODEL

## INNOVATOR- ENTREPRENEUR MODEL

- FULLFILLS INCLUSIVE INNOVATION CRITERIA

Direct assistance provided for innovators with the right attitude and drive to be entrepreneurs.

**100% funding up to a maximum of 47,880.00 USD.**

## LICENSING MODEL

- FULLFILLS INCLUSIVE INNOVATION CRITERIA

Innovators who do not wish to be entrepreneurs but are open to licensing with interested parties

**100% funding up to a maximum of 11,970.00 USD.**

## COMMUNITY ENABLEMENT MODEL

- IMPACTFUL TO COMMUNITY

Community benefit from the innovation diffusion.

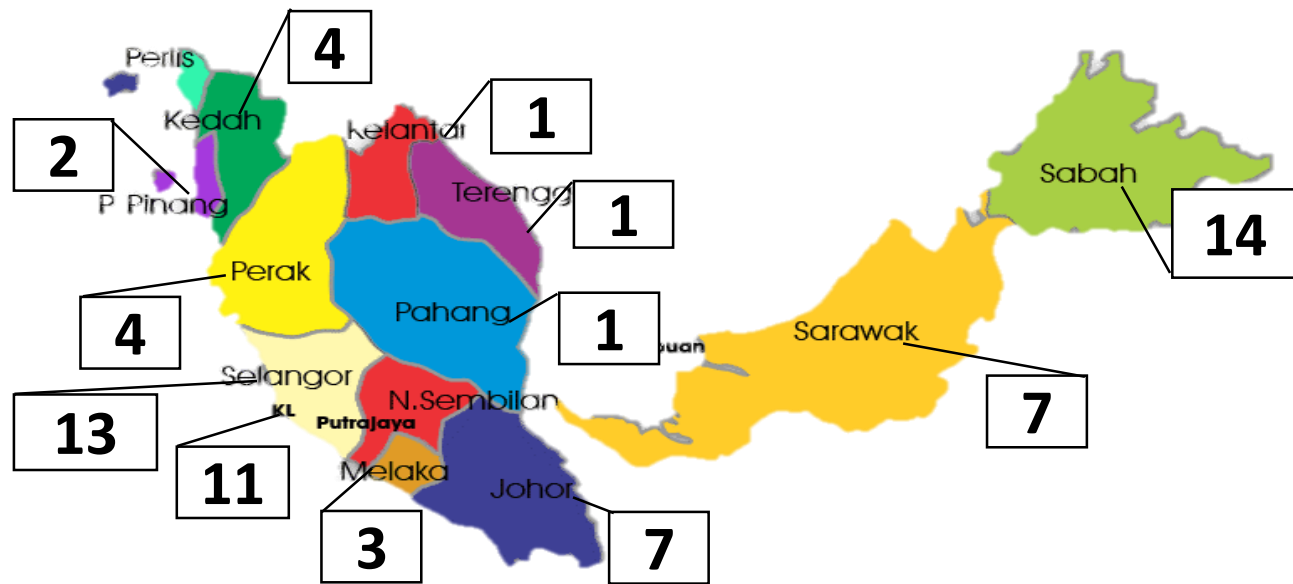
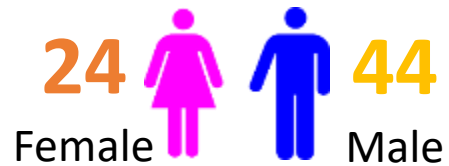
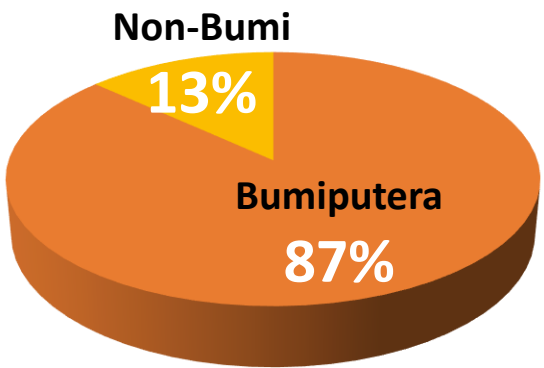
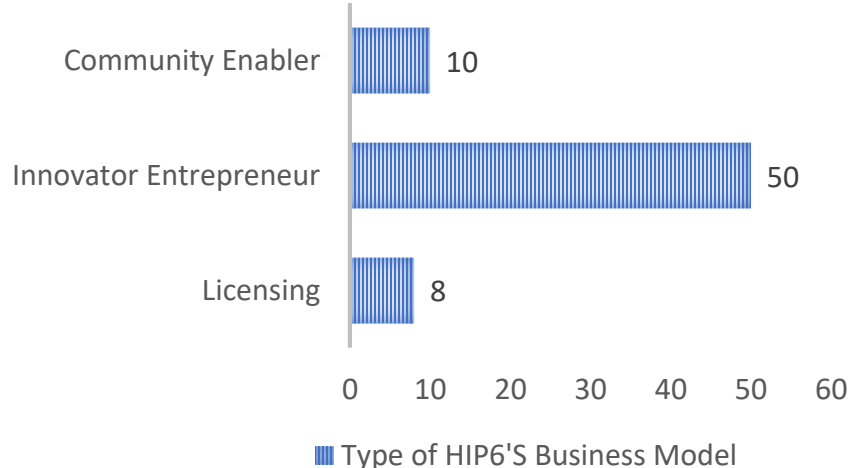
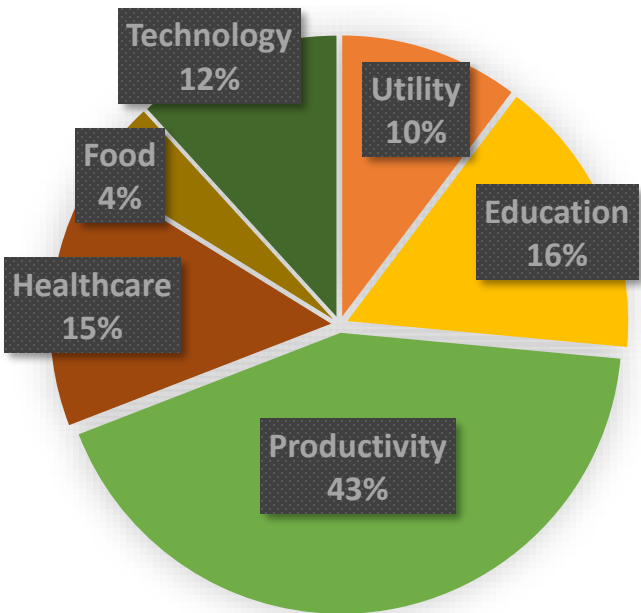
**100% funding up to a maximum of 11,970.00 USD.**

## INNOVATOR- ENTREPRENEUR MODEL

- IP IS CONVERTED AS PART OF COMMERCIAL OR OPEN SOURCE

Excluded groups may use the IP without licensing cost.

# Programme Overview for The Year 2015 - 2018





# **MAINSTREAMING GRASSROOTS INNOVATIONS (MaGRIs)**



# Malaysia Innovation Foundation mandate:

To drive innovation programs as per 11<sup>th</sup> Malaysia Plan (2016-2020).

Develop grassroots innovators with potential innovations and groom to become the community role model

Stimulate grassroots commercial activities into mainstream commercial activities

Opportunities for grassroots innovators to upscale their innovations towards mainstream economy

# PROJECT IMPLEMENTATION TIMELINE

Activities/Duration

## *System Development & Enhancement*

January - March

## *Product Development*

May - September

## *Coaching & Consultation*

May - November

## *Marketing & Promotion*

Throughout the year

## *Capacity Building & Skills Development*

May - December

# SCOPES

## **LEGAL & INNOVATION CONSULTATION**

- Innovation assessment
- Legal and Innovation framework

## **PRODUCT DEVELOPMENT**

- Prototyping (Phase 1)
- Enhancement, Testing & Validation (Phase 2)
- IP Registration, Company setup & product branding
- Miscellaneous

## **SYSTEM DEVELOPMENT AND ENHANCEMENT**

- Database system & hardware

## **PROMOTION & TRAINING**

- Promotion, Marketing & Event
- Training, Workshops & Skill Development



## ACHIEVEMENT 2016 - 2018

**737**

**IDENTIFIED INNOVATIONS**

**15**

**SELECTED INNOVATIONS**

**7**

**COMMERCIALISED  
INNOVATIONS**

### **Coaching & Training**

To upskill 200 innovators or potential innovators  
& create 3 GRI Ambassador

(2016-2020)

### **Innovation Development**

Develop 10 marketable GRI up to functional  
prototype

(2016-2020)

### **Marketing & Promotion**

Promote the program & produce marketing  
materials

(2016-2020)



**MOSTI Social Innovation (MSI)**

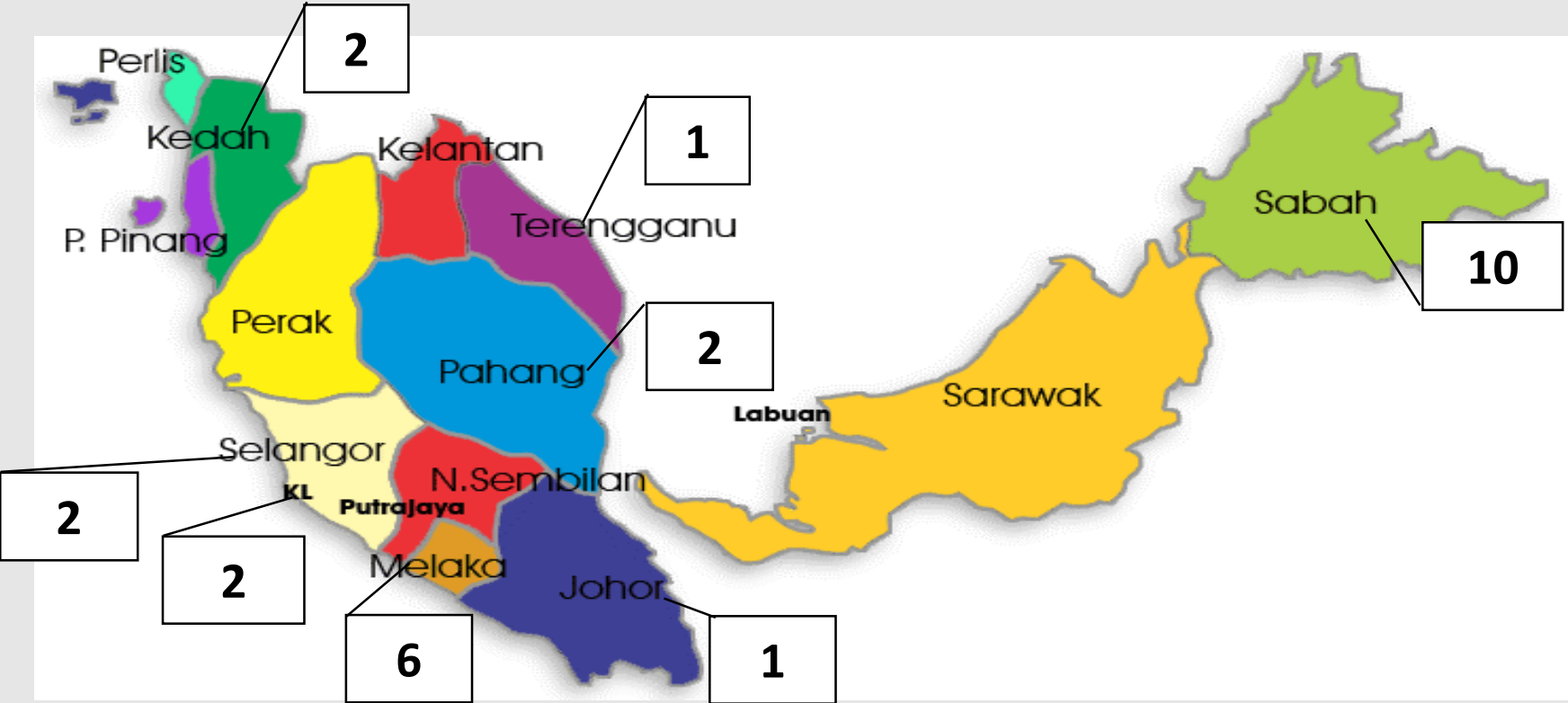
# MOSTI Social Innovation (MSI) Program Objective

- Improve the welfare of the community
- Services implementation
- Using existing technology replication



# MOSTI SOCIAL INNOVATION (MSI) PROJECTS

|                                   |                                   |                                      |
|-----------------------------------|-----------------------------------|--------------------------------------|
| 5 Projects 2015<br>246,582.00 USD | 4 Projects 2016<br>279,826.04 USD | 17 Projects 2017<br>1,231,765.67 USD |
|-----------------------------------|-----------------------------------|--------------------------------------|





# PROGRAMS SUCCESS STORIES

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# HIP6 INNOVATION PRORDUCTS

## UTILITIES



### NAKUTIP

- Collection of the oil palm fruit made easier
- Targeted farmers community
- Increase the productivity

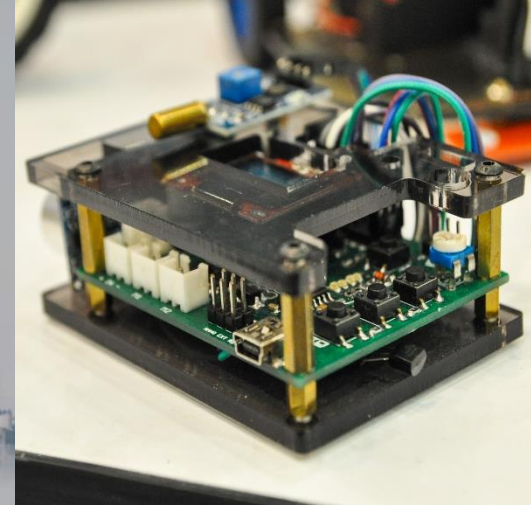
## HEALTHCARE



### CERVISAFE

- Set of set-tapping test tools for women for preliminary screening of cervical cancer

## EDUCATION



### NANO MAKER KIT

- Multi-functional tools through STEM
- Teaching tool

## PRODUCTIVITY



### THROWFEX

- Innovate to throw the product to the fire
- Extinguish fire from far distance
- Smaller and lighter to carry



# MaGRIs INNOVATION PRORDUCTS



## BANANA D'CRAFT

- Paper-making technology by using banana stems
- Environmental sustainable
- Additional income for the community from product sales



## BATTERY PACK C13

- Low voltage capacity allows it to last longer
- No sound or air pollution
- Objective was to help night market sellers



## EZ EFINITY WATER FILTER CAP

- Act as a connector for water filter, bottle and hand pump
- Good for rural areas with no electricity or water piped supply



## MUAMALAT INTERACTIVE GAME (MIG)

- Applying Muamalat or Islamic Finance system in board games
- Charitable concept
- Those who gives more will win the game



# MSI PROJECTS



## SPACE ART

- Improve the quality of Astronomy teaching and learning
- Exposure to Astronomy & Space Science
- Provide astronomical tourism promotional materials



## MULBERRY TREES IN KG. TUDAN, FOR SUSTAINABLE LIVELIHOOD

- Create interest within the community to develop mulberry products
- Create job opportunities and income
- Provide Solar Dryer technology for production
- Potential: Argo tourism



## SILAGE & OLIGOKITOSAN TECHNOLOGY

- Increase farmers income by enriched corn silage technology with oligocitosan



## SENSORI MUTIARA

- Improve teaching and learning methods especially for Autism children
- Practice positive intervention modules for educators and parents





“Aquafarming for a better tomorrow”



# “Farmers in Kundasang want efficient mechanism”

(Sources from Borneo Post, 6 July 2016)

## Wrong traditional farming techniques

- 1 Optimal use of agricultural land
- 2 Earthquake incident – water source badly damaged
- 3 Vegetable production affected
- 4 Huge losses for the farmers







**The first commercial aquaculture farm in Kundasang, Ranau, Malaysia.**

**Aquaponic system application; vegetable (hydroponic) and fish farming (aquaculture) in a common system.**

**Able to optimize the use of small space to produce great productivity.**



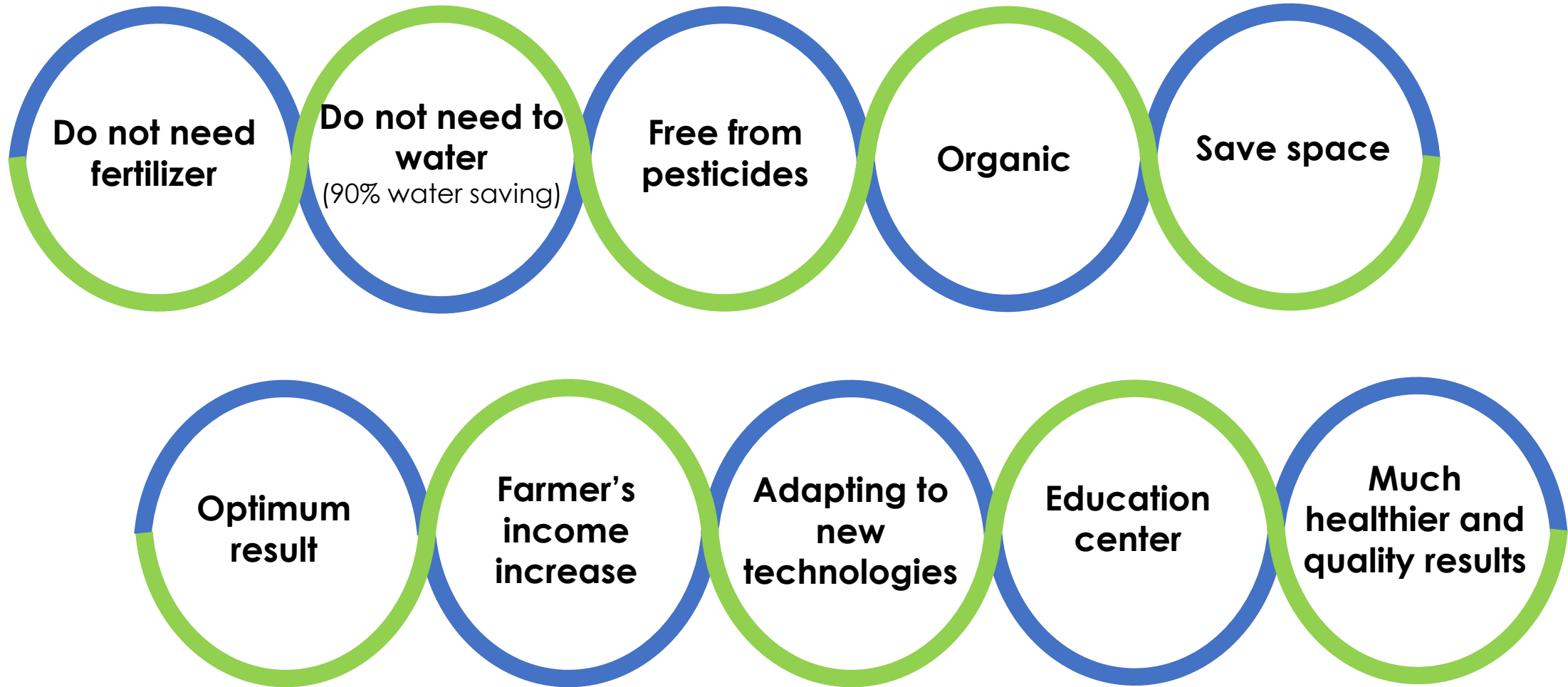
**Aquaculture**



**Hydroponics**



**Aquaponics**



## Fresh Vegetables and Freshwater Livestock



**Strawberry**



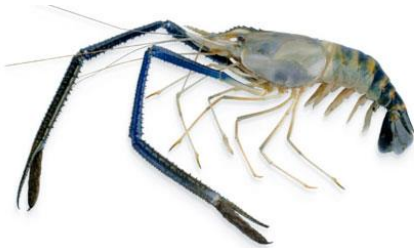
**Pak choy**



**Tomato**



**Lettuce**



**Lobster**



**Freshwater Lobster**



**Tilapia Fish**









# YIM GOES DIGITAL!!

2019 ADDITIONAL STRATEGIC DIRECTION

## Digital Application

- “*GET FOOD FOR FREE!*” just a click away by using Oh!FreeFood application
- Ecosystem: Environment, Economy and Social System

## Virtual Augmented Reality

- Through innovation and engineering brings AR to the industry
- Ecosystem: Economy and Social System







**oh! free food**

**GET ANY FOOD FOR FREE!**

# Food Waste

Global....

- **1.3 billion tonnes** food gets lost or wasted every year
  - Industrialized countries **US\$ 680 billion**
  - Developing countries **US\$ 310 billion**

(UN Environment, (May 4, 2019), Worldwide Food Waste)

Malaysia.....

- Food waste
  - Daily **16.7 thousand metric tonnes**
  - Yearly **6.1 million metric tonnes**
- In 2018:
  - Households 38%
  - Wet Markets 24%
  - Restaurants 23%
  - Hotels 7%

(Muhd Zaaba Zakeria, (May 17,209), An Endless Problem?, New Straits Times)





# The Objective



1. Share any new food, extra untouched food and excess food for free

2. Request the listed food for free.

Receiver and the collection point determine by the food provider

**All the food must be in a very good condition!**

Food waste awareness to educate the people.

# How Oh!FreeFood Works

**SHARE a food**

Take a picture of your food, upload it with its details and simply list it!

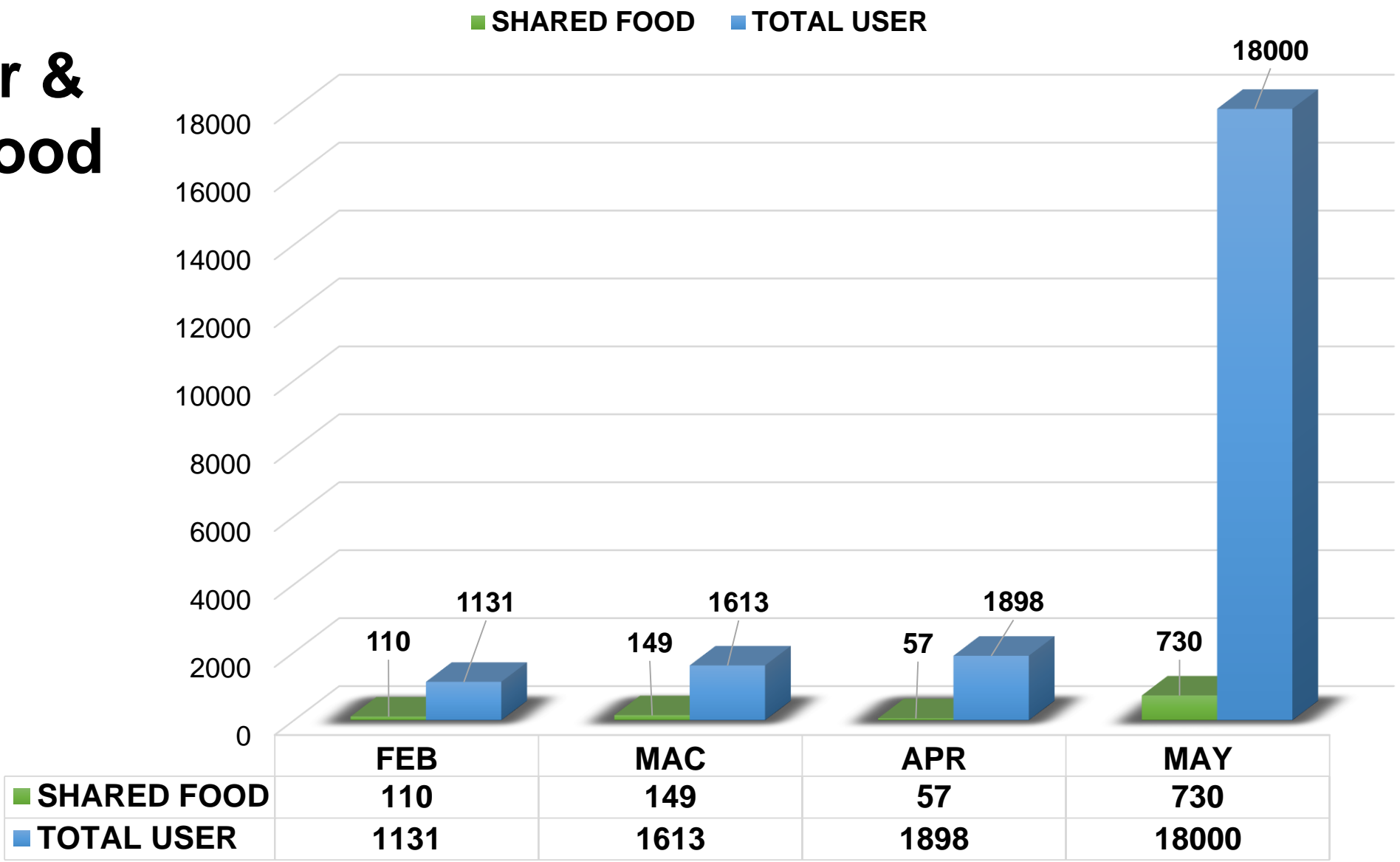
**GRAB a food**

Click **Grab a Food** icon and request the food of your choice and wait.

Under this tab you can check on your request and post status.

**REQUEST & post status**

# Total User & Shared Food



# UN ESCAP PROPOSED ROLES

## ① Co-host Meeting

Grassroots Innovations initiatives impact in Malaysia

## ③ Streamline Ecosystem

- Environment
- Economy
- Social

## ② Business-to-Business (B2B)

Knowledge and experiences sharing related to Grassroots Innovations

## ④ Sustainability Initiatives

Supports from the Ministry, Government agencies, NGOs, Private sector in conjunction to Malaysia Commercialization Year 2019 (November) and Grassroots Innovations (B40)



# Our Social Sites



FACEBOOK

Yayasan Inovasi Malaysia - YIM -  
Malaysia Innovation Foundation

@YayasanInovasi



TWITTER

Yayasan Inovasi Malaysia

@YayasanInovasi



INSTAGRAM

Yayasan Inovasi Malaysia (YIM)

@yayasaninovasi



# THANK YOU



Yayasan Inovasi Malaysia  
L3-E-1A, Enterprise 4  
Technology Park Malaysia  
57000 Kuala Lumpur MY

+603-8996 1714  
info@yim.my

<http://www.yim.my>