

Building MSU-IIT's Innovation Ecosystem: A complex Task in a complex setting

{ PASCN 2018

Disruptive Technologies: Opportunities, Challenges and Risks
October 8, 2018, UP Bonifacio Global City}

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Vice Chancellor for Research and Extension

Mindanao State University – Iligan Institute of Technology (MSU-IIT)



Maria Cristina Falls



The *Iligan* Setting: some info and facts

No. of Universities and Colleges

- **1 – state university**
- **6 – colleges**
- **8 – technical schools**

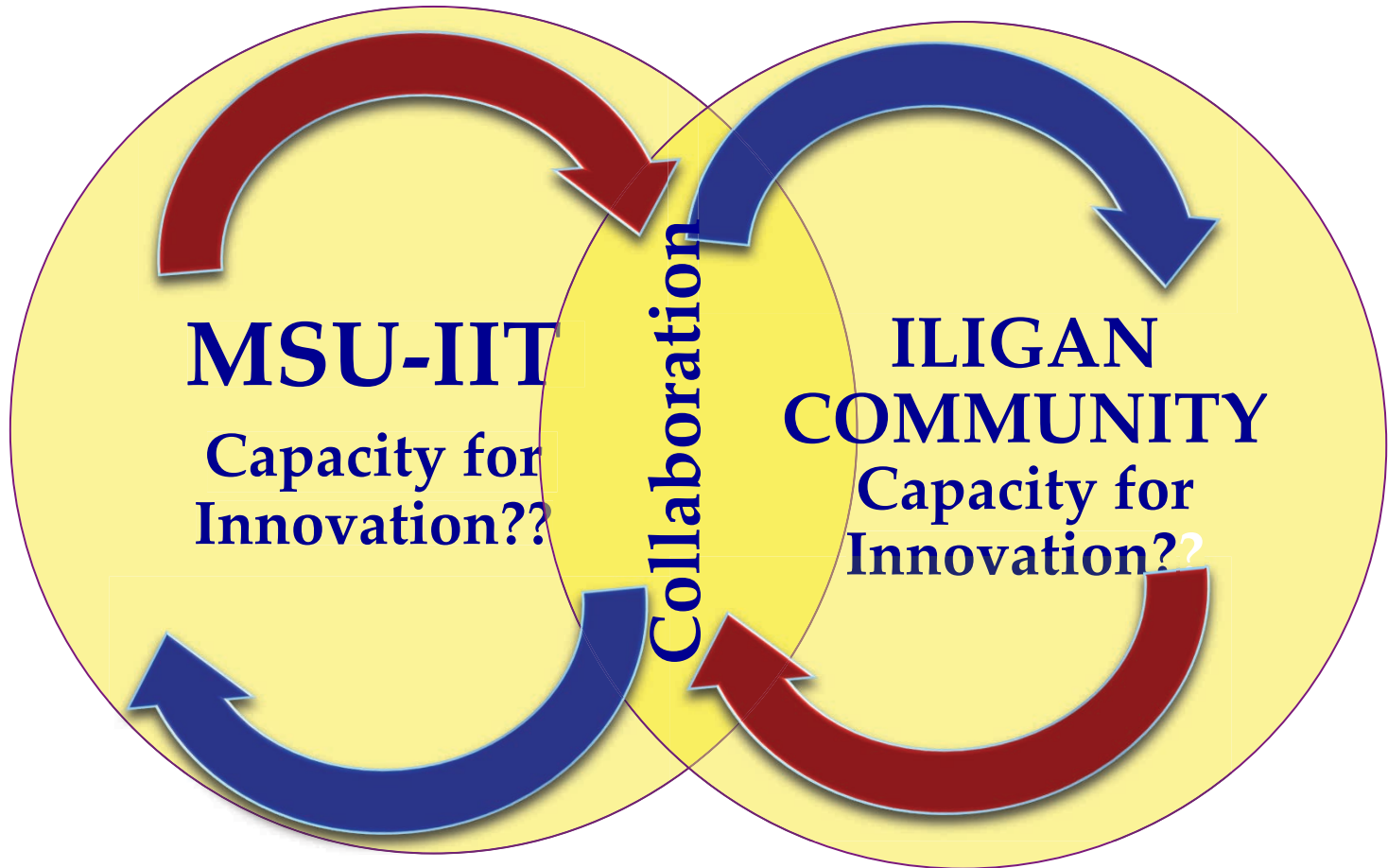
No. of Major Industries *

- **15** (flour, cement,oil..)

No. of registered SMEs*

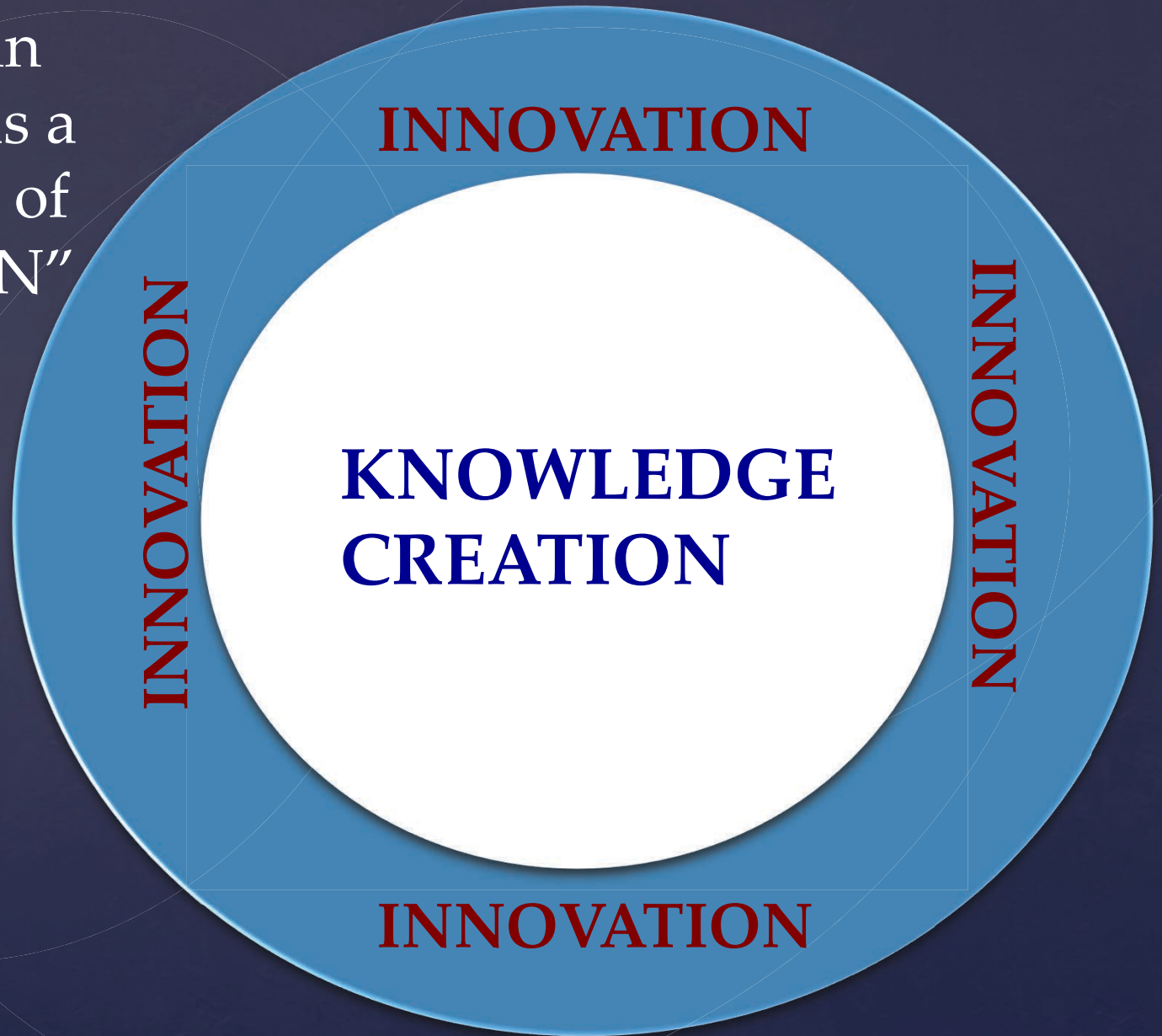
- **527** (bamboo, processed food, agri products....)

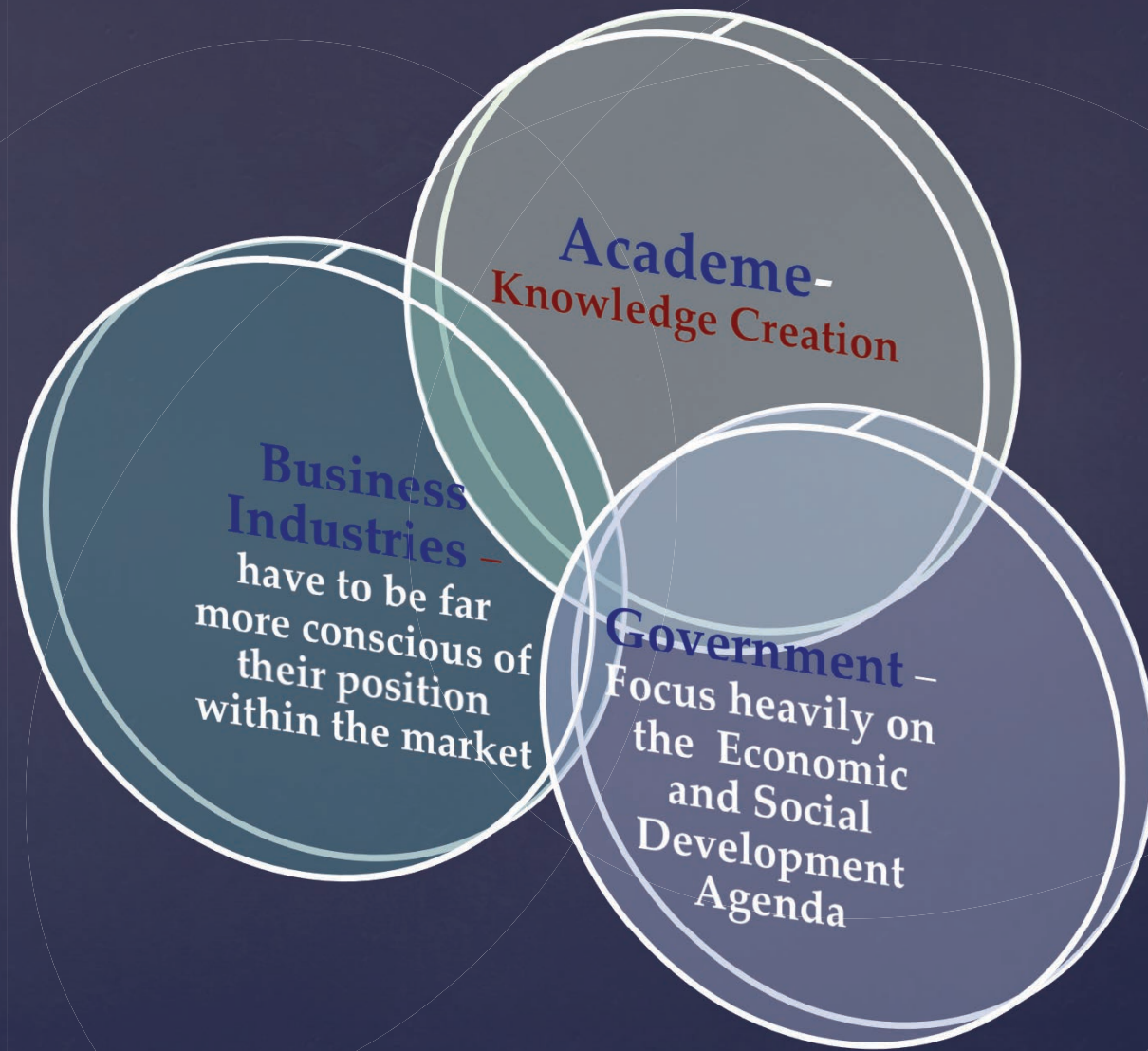
In Region X : 65- Private HEIs
46 – Public HEIs



JBBornales

“KNOWLEDGE
CREATION in
organizations is a
central ‘tenet’ of
INNOVATION”





CAN *MSU–IIT* DO IT?

Domain of Expertise

MSU-IIT's Tacit and Explicit Knowledge

SHOULD *MSU–IIT* DO IT ?

The *MSU-IIT* : some info and facts

MSU-IIT

One of the eleven satellite campuses of MSU –System

MSU-IIT

MSUs flagship campus for Science and Technology

MSU-IIT

Established on **July 12, 1968** by **Republic Act 5363**

MSU-IIT

composed of seven colleges

MSU-IIT

has a total of **559** regular faculty members

Commission on Higher Education (CHED) Recognition

CENTER OF DEVELOPMENT (11)

1. Civil Engineering
2. Electrical Engineering
3. Ceramics Engineering
4. Chemical Engineering
5. Metallurgical Engineering
6. Marine Science
7. Statistics
8. IT Education
9. Filipino
10. Sociology
11. History

CENTER OF EXCELLENCE (7)

1. Biology
2. Chemistry
3. Mathematics
4. Physics
5. Mechanical Engineering
6. Electronics & Communication Engineering
7. Teacher Education

Member
Engineering
Research &
Development for
Technology
(ERDT)
Consortium

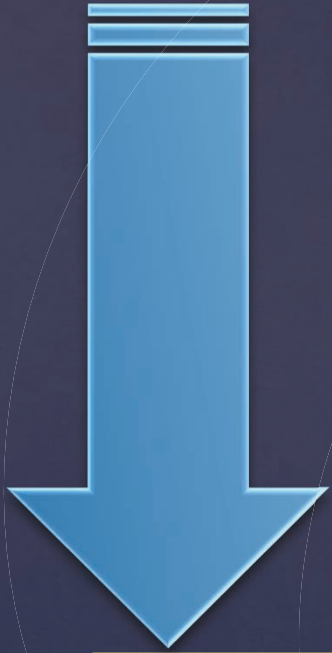
Member
DOST –
National
Science
Consortium

Member
ASEAN University
Network/Southeast
Asia Engineering
Education Dev't
Network (AUN/
SEED Net)

Member
CHED-Philippine
Higher Education
Research Network
(PHERNet)

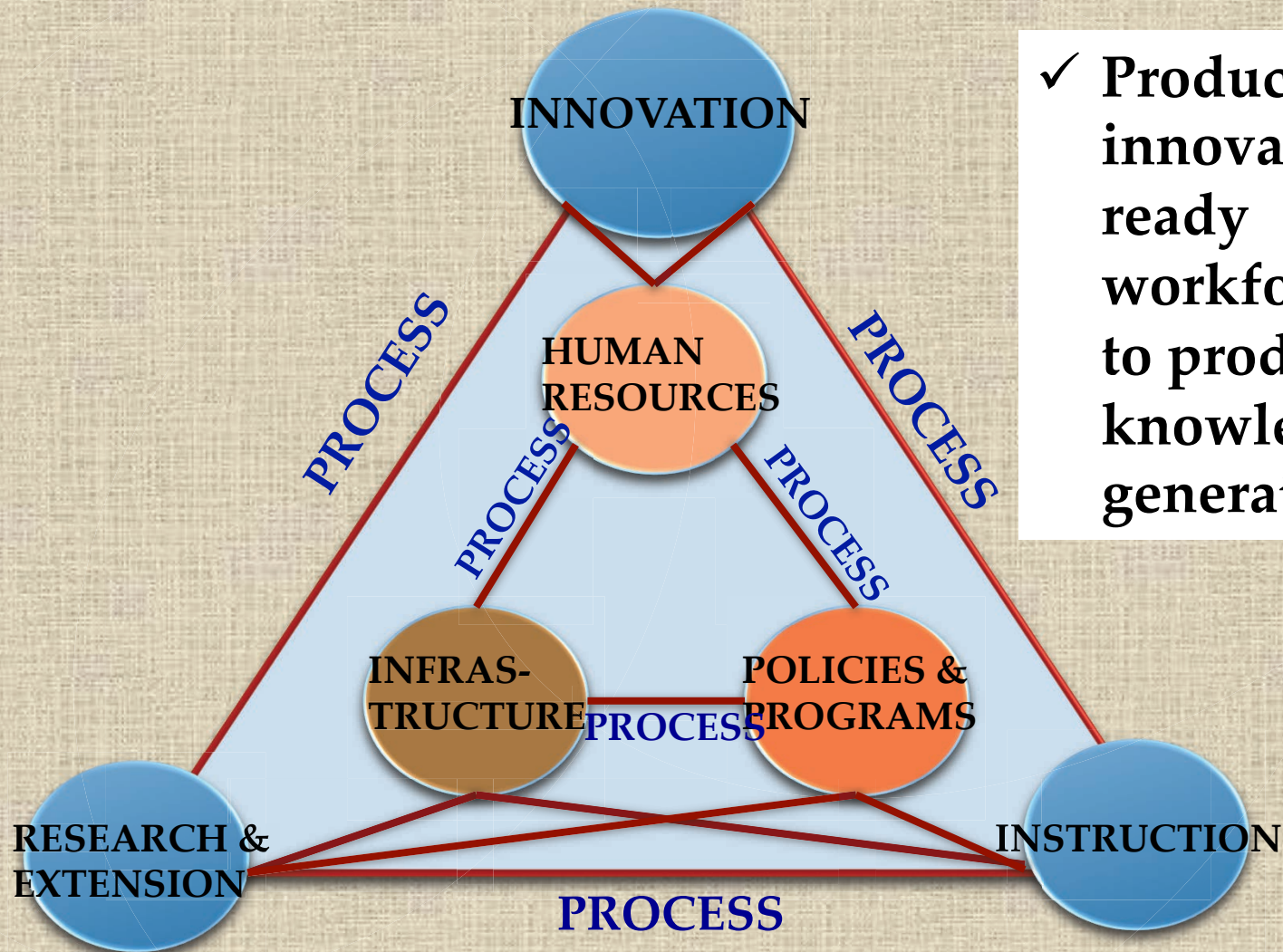
Member
National
Consortium in
Graduate Science
& Mathematics
Education

IF MSU—IIT CAN DO IT...



HOW SHOULD MSU—IIT
DO IT ?

DEVELOPING A SUSTAINABLE CULTURE OF RESEARCH & INNOVATION @ MSU-IIT



✓ Produce an innovation ready workforce; to produce knowledge generators.

Policies and Programs

Faculty Development Program

Visiting Research Professorship Program

Research Dissemination and Publication Award

Awards to inventors and incentive to patent agents

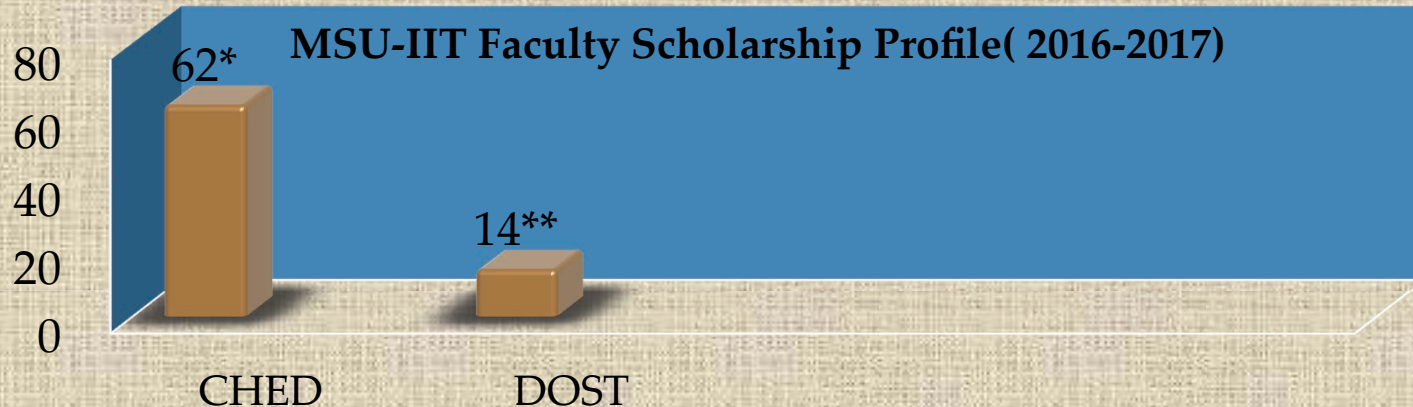
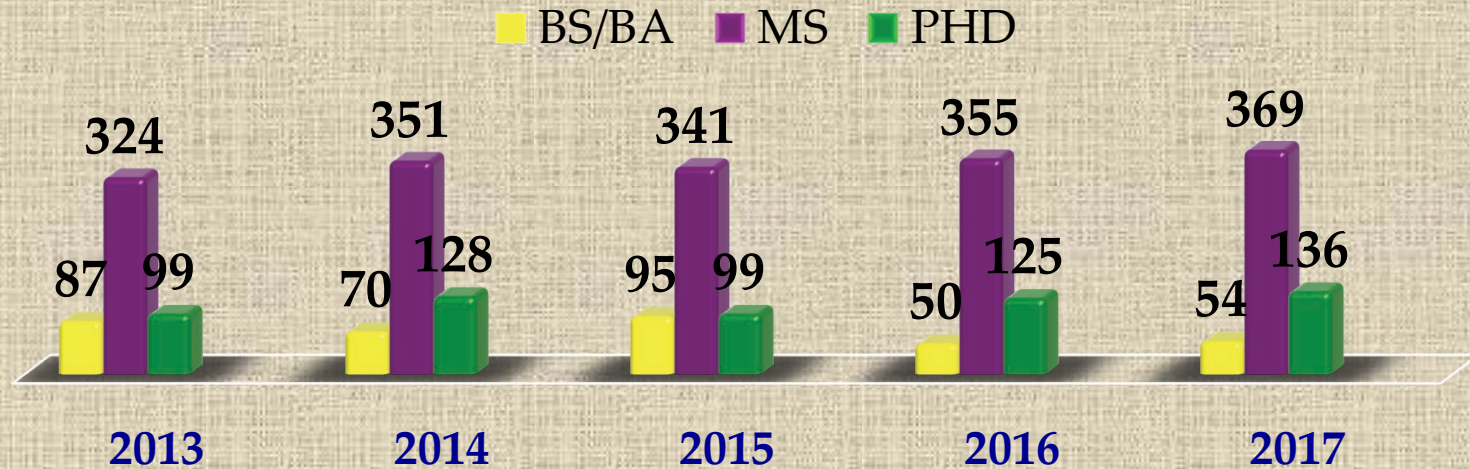
Institutionalized Extension Program “WE CARE”

Internally funded research and extension projects

Research and Extension de-loading

Faculty Development Program

MSU-IIT Faculty Profile

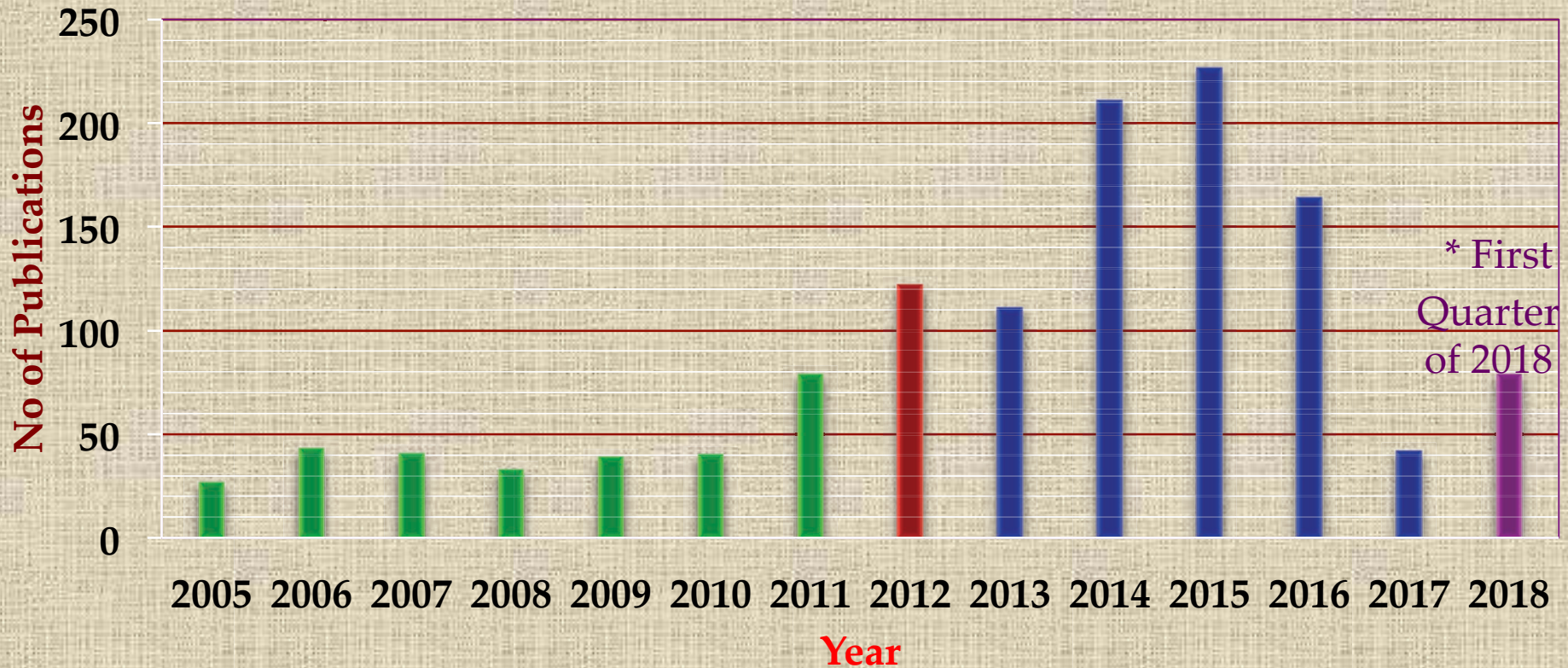


*6/62 = staff

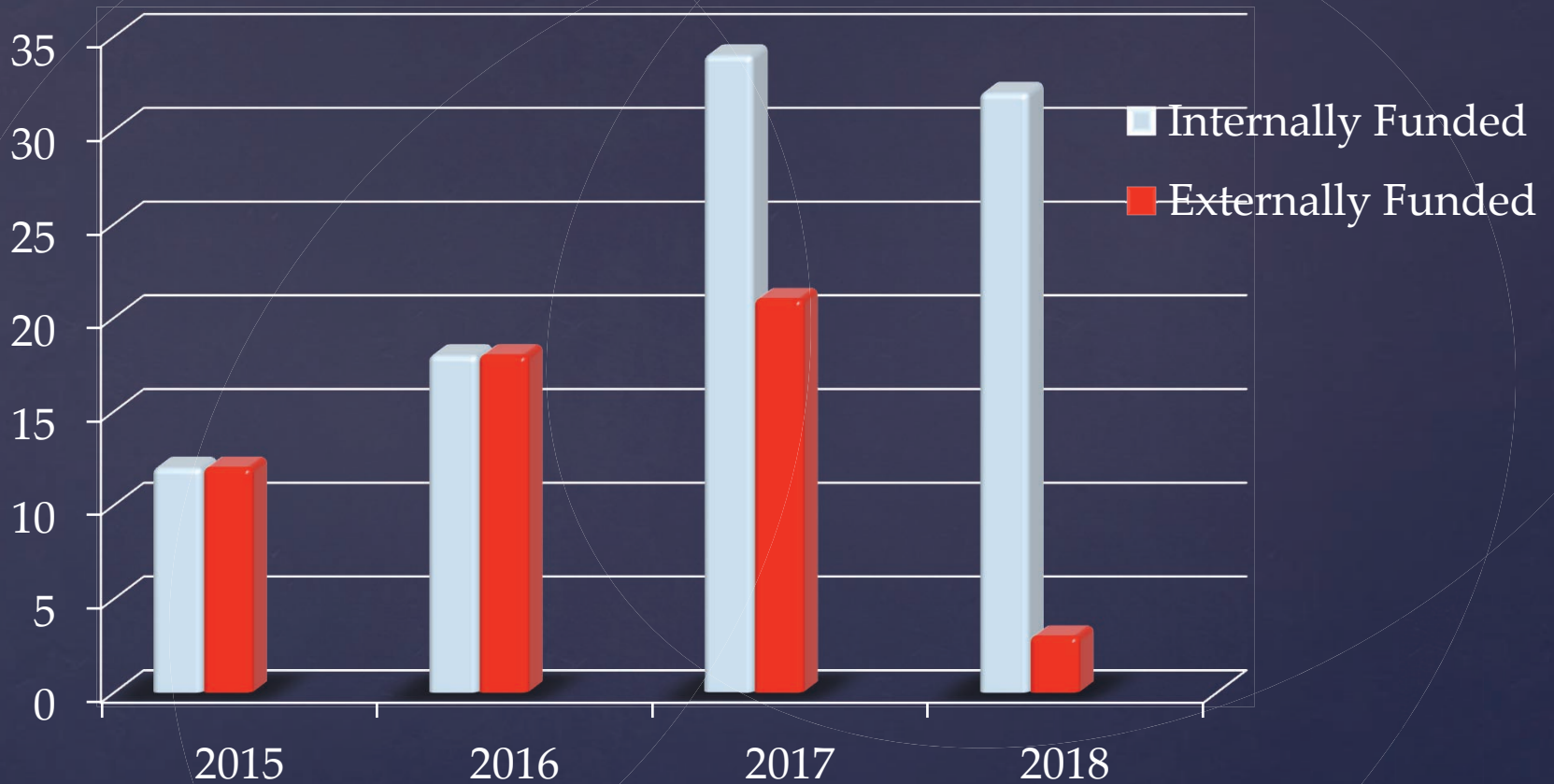
** DOST- ERDT scholars are not included

MSU-IIT's Research Outputs Assets

MSU-IIT Publication in international refereed journals
2005-2017

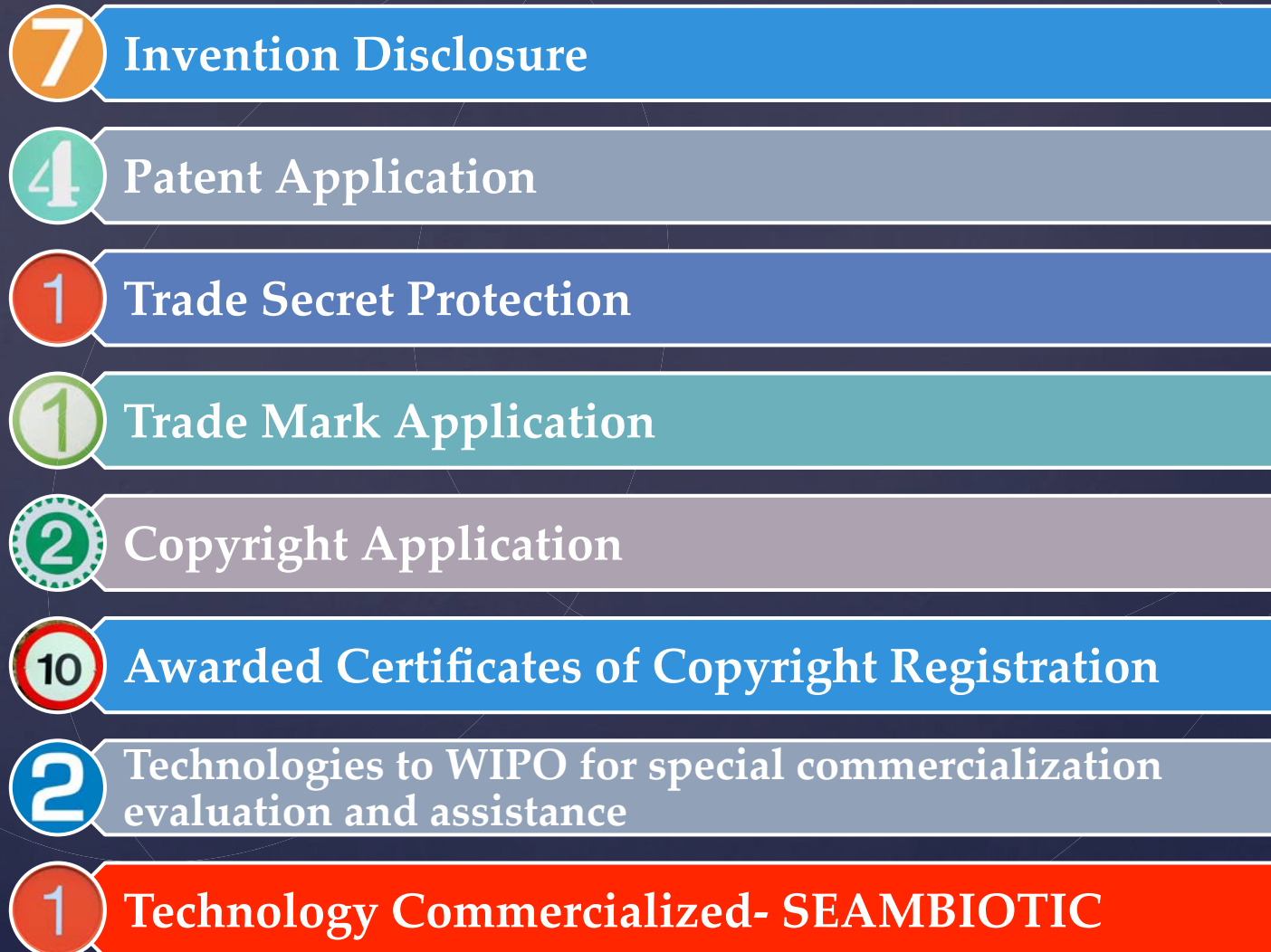


FUNDED RESEARCHES



* First Quarter of 2018

MSU-IIT's IP Assets (2017)





BUILDING RESILIENT COMMUNITIES

Minimize disruption to everyday life and local economies

Prevent or minimize loss or damage to life, property, and the environment



Recover quickly from disaster

Enhance preparedness through sound risk management

MINDANAO STATE UNIVERSITY-
ILIGAN INSTITUTE OF TECHNOLOGY

NOVEMBER 2016



INNOVATION CONVERGENCE

AUGUST 2016

Innovation Convergence is a collaborative consortium of different offices and agencies in Iligan City to bring and promote innovation in Northern Mindanao.

Organized by



Supported by



StartUp and the City

PAVING THE WAY FOR INNOVATION
May 2017, MSU-ILIGAN INSTITUTE OF TECHNOLOGY



www.gg.gg/startupandthecity

HEALTH RESEARCH AND INNOVATION MONTH

MARCH 1-31, 2017

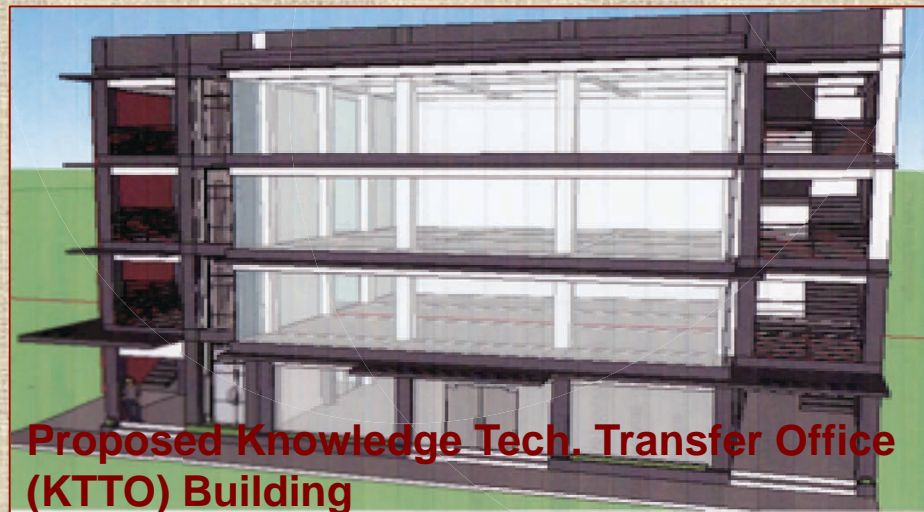
ORGANIZED BY

DEPARTMENT OF RESEARCH

OFFICE OF THE VICE-CHANCELLOR
FOR RESEARCH AND EXTENSION



Service Infrastructures @ MSU-IIT



Groundbreaking : October 27, 2017

Service Infrastructures @ MSU-IIT



Groundbreaking : October 27, 2017

Just recently.....

We have launched

*the **BioProducts Research Lab***

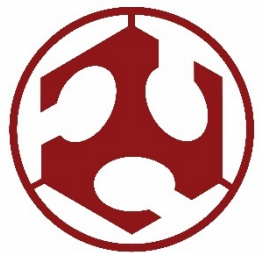
Bioproducts innovation towards

a sustainable economy



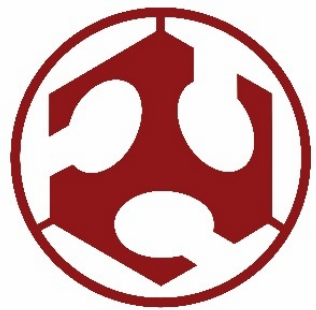
A DOST-PCIEERD funded

research



FABLAB
MINDANAO

LAUNCHING (August 18, 2016)



FABLAB
MINDANAO

Skills Training
Conducted : **38**

Linked Local
Startups: **20**

**Technology
Access
Center**

**Training
Provider**

**Service
Bureau**

**Incubation
Hub**

Students Served : **652**

faculty members
served : **63**

MSMEs Assisted: **56**

products developed : **14**

prototypes
developed: **27**

Linkages
established: **8**

**** Data as of 2017**

Hush tag

www.facebook.com/hushtag.tracker
 hushtag.tracker@gmail.com
 +63 949 994 2018 | +63 906 801 3526



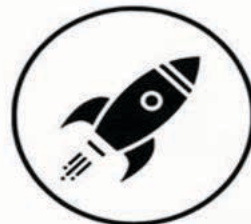

Makers:
 Clark Reuben Galope
 Christian Alan Toring
 Edison Montes

Powered by
MSU-IIT
 INNOVATION ECOSYSTEM

ENERGIZE

2018 TARINTIK LAUNCHING

Pushing the boundaries of fuel efficiency



2:00 PM
 31.January.2018
 COE Grounds



**SMART
 PORTABLE
 WEATHER
 SYSTEM**

Makers:
 Mark Angelo Nambatac
 Dick Arnie Badang

Powered by
MSU-IIT
 INNOVATION ECOSYSTEM

Makers:
 Mark Angelo Nambatac
 Dick Arnie Badang

Powered by
MSU-IIT
 INNOVATION ECOSYSTEM



Shell
Eco-marathon®



Mindanao State University-Iligan Institute of Technology

Some of MSU-IIT Student's Project assisted by FabLab

SUMMER TECH CAMP FOR KIDS

APRIL 2017





FAB TRAIN

Series of tr
that focus
prototyping
architects,



FAB TRAIN



A DIGITAL EMBROIDERY TRAINING WORKSHOP

NEEDLE AND THREAD

FEB - MAY 2018

FABARANGAY

SANTIAGO

SEPTEMBER 5-17, 2018

FAB FOR SCIENCE



FABLABS THE CITY AND CITY



MAY 2017



2009

2010

2011

2011

2012

2013

2013

2014

2015



iDEYA BY ITS NUMBER

6000+



Participants

25



Formed
Startups

69



Organized
Events

34



Visited
Schools

Incubation Program



CENTER OF INNOVATION & TECHNOPRENEURSHIP
MSU-ILIGAN INSTITUTE OF TECHNOLOGY

Mindanao Startup Challenge 2016

Innovative solutions to real world problems

Call for applications!

Application Period: June 6 - September 17, 2016

18 Startups

 CENTER OF INNOVATION & TECHNOPRENEURSHIP
MSU-ILIGAN INSTITUTE OF TECHNOLOGY

STARTUPS BATCH 1

my.Eskwela

Web platform that monitors student's school performance

 knapp

Online delivery application through Habal-habal drivers

Ardu*farm*

A smart and modular aquaponics system



Web Platform that connects Tutors and Tutees

MAGBISAYA
Mak-at-on samtang gadula

Cebuano learning app for children



A Filipino- made mind board game



Combines fun and learning through mobile games

 ideyacti@gmail.com  /ideya.cit  @ideya_cit  @ideya.cit

BATCH 2

- Xerkit
- Dementrack
- Hushtag
- Panda
- Daedelus Tech
- Moneie Vending Machine
- Travenizer
- Sari Sari Go
- LED Light
- BoonPH
- Lamon

IOT -3

Apps -9

Hardware-6

TEENPRENEUR **PATIGAYON AWARDS**

ILIGAN BUSINESS IDEA OF THE YEAR
PATIGAYON AWARDS YEAR 1

A business idea competition for Senior High School

DEADLINE: SEPTEMBER 15, 2017

For details, please contact Prof. Marlo Novino of CBAA, MSU-IIT at patigayonawards@gmail.com or at 0917-626-2045.

Brought to you by **dti** **NEGOSYO**



Hinaplanon National High School Team



Coaching and mentoring.....

Photo Credit: TEENPRENEUR FB PAGE

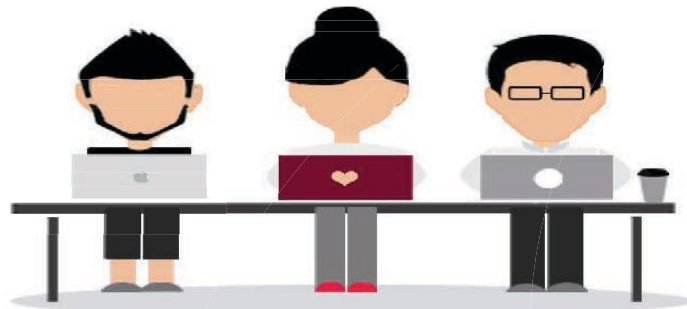
A Business Idea Competition for Senior High Schools in Iligan City that aims to provide a platform among students to showcase their creativity and innovation in creating a product intended to boost the tourism of Iligan City. This business idea is anchored to the DTI's One Town One Product Next Generation (OTOP Next Gen) program.



</ideyahack

Peace Edition

December 3-4, 2016
iDEYA: CIT@MSU-IIT



Register thru ideyahack.eventbrite.com



</ideyahack>

Health Edition



Register thru ideyahack.eventbrite.com

March 18-19 2017 | iDEYA: CIT@MSU-IIT

Cash Prize: P 20,000



</IDEYAHACK>

Tourism Edition

*In 36 hours, build a startup that will promote
the Tourism Industry of Iligan City*

AUGUST 26-27, 2017
iDEYA: CIT@MSU-IIT



2010

2011

2012

2013

2014

2015

2016

MSU-IIT Research Center



**Premier Research Institute for Science
and Mathematics (PRISM)**

**CORE PROGRAM : DISCOVERY,
DEVELOPMENT AND DELIVERY OF NATURAL
PRODUCTS (D3NP)**

9 Research Clusters:

- **Biotechnology**
- **Nanoscience**
- **Natural Products &
Drug Discovery**
- **Complex System**
- **Applied Math and
Stat**
- **Theoretical Science**
- **Climate Change**
- **Renewable Energy**
- **Biodiversity**

Established
the
Intellectual
Property Unit



Became host
institution of
IPOP^{HIL}'s
ITSO

MOA
Signing
with
Nuratech
Company

Research
funded by
**USAID-
STRIDE**

2010

Drafted
MSU-IIT
Policy on IP
rights

2012

Capacity
Building on IP
Management

2014

2015

Start of an
approved
research project:
Development of
prebiotic
functional food
supplement from
fructooligosaccha
rides.....

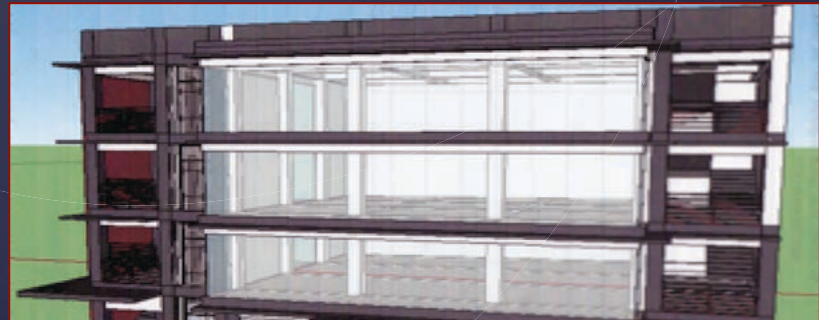
- BOR approved the establishment and construction of a **Knowledge Technology Transfer Office (KTTO)**.

- Designated by IPOPHIL as **one of the IP Spokes in the Phil.**

2017

- launched functional food supplement products

- groundbreaking of KTTO



- 6 patent agents

**Functional food
supplement**

**MSU – IIT in partnership
with Nutraceutical Biopharma**

The background features three large, overlapping circles in a light blue color. A central rectangular box with a thin white border contains the text.

Some Challenges

A Complex Setting

Stakeholders

Academe
Government
Business &
Industry....

Competence and
Readiness for
Research &
Innovation

Regional and
National
Needs....

Networks

Governmental
Programs and
Priorities

Complexity of the Task

The diagram consists of five overlapping circles arranged in a circular pattern. The circles are dark blue with white text. The top circle is 'Identification of goals', the middle-left is 'Execution', the middle-right is 'Monitoring', the bottom-left is 'Development of a Strategy', and the bottom-right is 'Adaptive Management to meet new challenges'. The circles overlap significantly, creating a central area where all five stages intersect.

**Identification of
goals**

Execution

Monitoring

**Development of
a Strategy**

**Adaptive
Management to
meet new
challenges**

Skill Related Challenges Companies will face with Industry 4.0

- ✧ Up-skilling
- ✧ Re-skilling
- ✧ Continuous learning
- ✧ Mindset Change

“Jobs are not going away, but the needed skills for good jobs are going up” James Bessen, Boston Univ.

“universities must **define themselves in individual terms rather than emulating others**”

Resources

Programs
& Policies

Infras-
tructure

“Institutions of higher education **must develop strategies that transcend imitation.**”

Innovation

Imitation



The background features three large, overlapping circles in a light blue color. A central rectangular box with a thin border contains the text. The text is in a white, italicized serif font.

Some Thoughts

➤ “Inch by inch life is a cinch;
yard by yard life is hard.”
=> **Thoughtful planning is a must.**

➤ “One is too small to achieve greatness.”
=> **Collaboration is the key; when we
collaborate we are building relationships.**

**The culture of research and
innovation thrives in a climate that
celebrates creativity...**

DAGHANG SALAMAT