

# Incubation Support System for facilitating Technology Transfer and Start up Internationalization - Indonesian Experience

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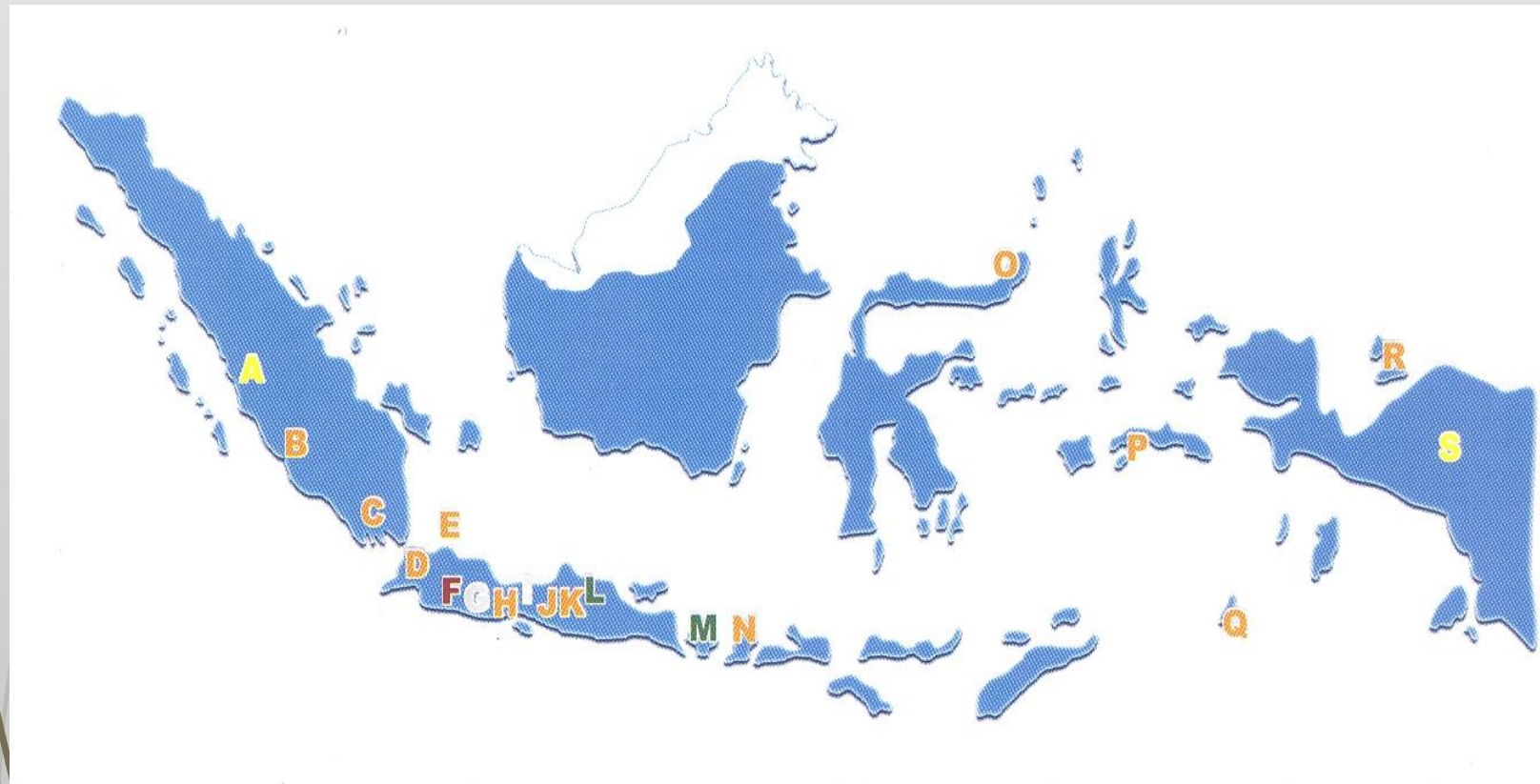
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**Indonesian Institute of sciences**

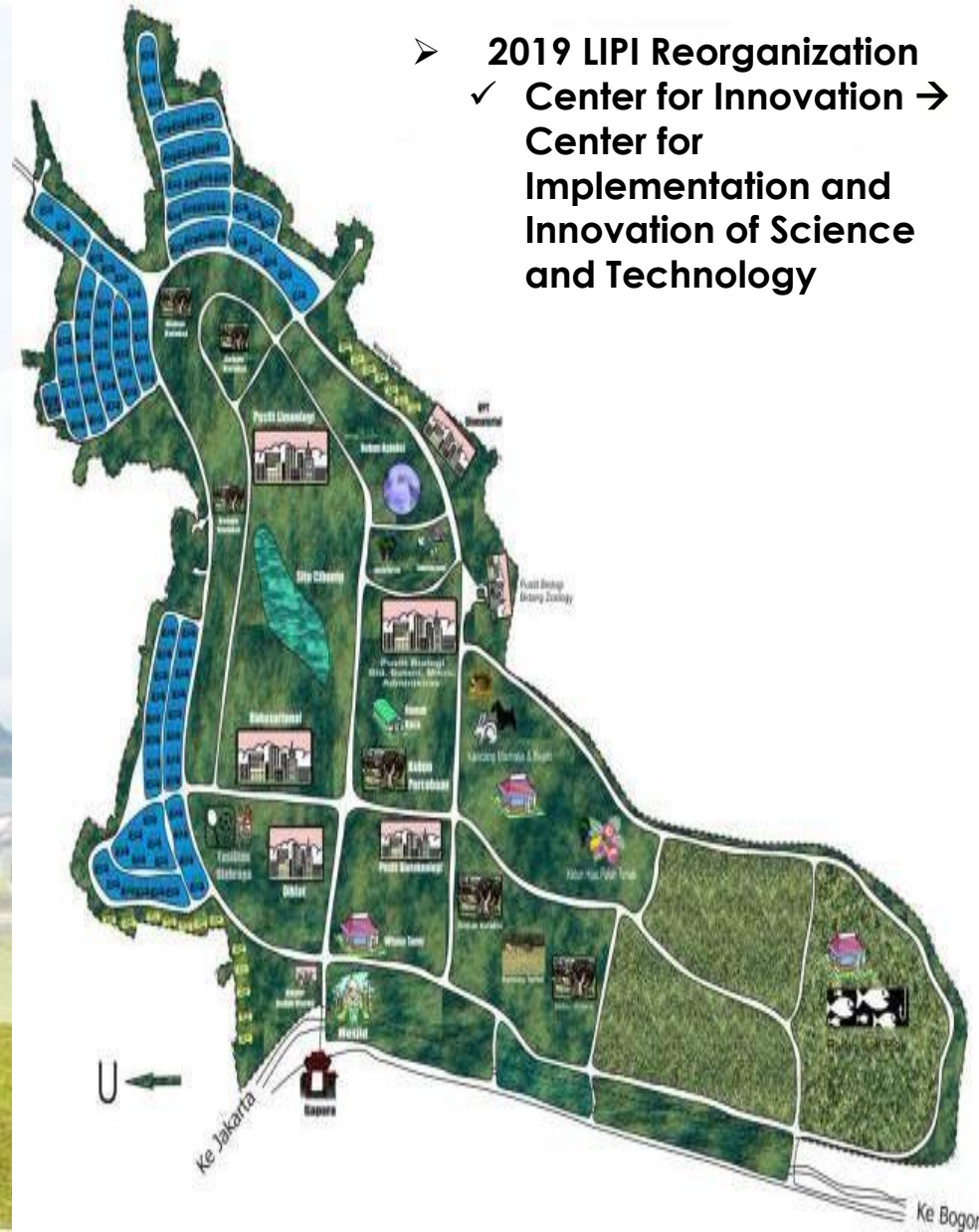
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- 25 R&D Centers (Technical Sciences, Life Sciences, Social and Humanities, Scientific Services, Earth Sciences)
  - 18 Technical Implementation Units
    - 4 Botanical Gardens

# CENTER FOR IMPLEMENTATION AND INNOVATION OF SCIENCE AND TECHNOLOGY (PPII)

- ❖ Established in 2001
- ❖ Managing research and its commercialization
- ❖ recognized as national technology business incubator in 2013



# CENTER FOR IMPLEMENTATION AND INNOVATION OF SCIENCE AND TECHNOLOGY (PPII)

## IP MANAGEMENT DIVISION

- IP Management (registration, consultation/drafting, patent drafter, patent maintenance)
- IP Valuation
- Patent drafter training

## ADMINISTRATION DIVISION

### Industry facilitation:

- Workshop
- Pilot plant
- Lab & Equipment
- Tenant Room
- Meeting Room

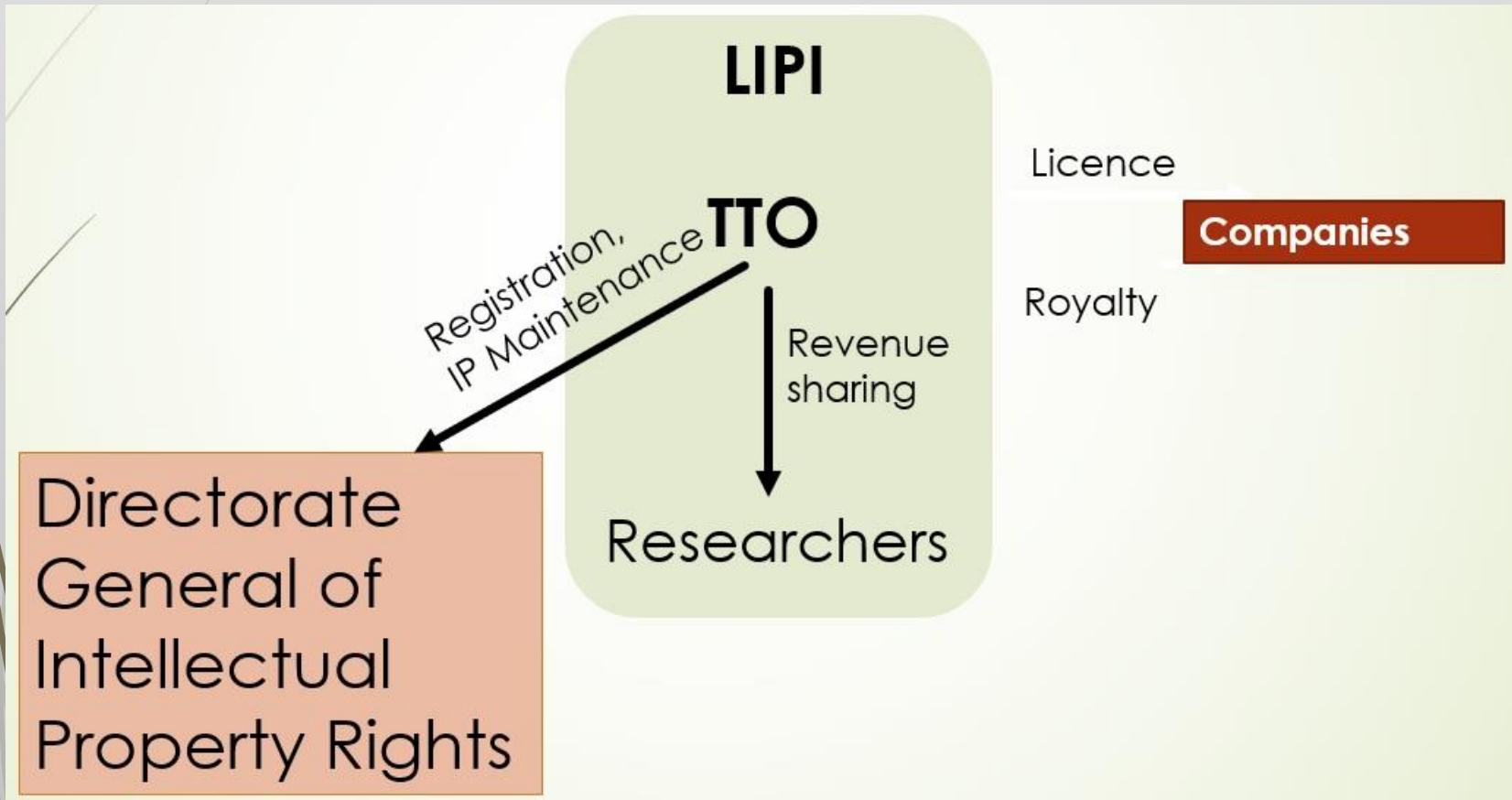
## BUSINESS INCUBATION DIVISION

- Incubation for Start Up
- SME Development

## TECHNOLOGY TRANSFER AND INNOVATION DIVISION

- Promotion (Business matching, Coaching, Business presentation, exhibition, dissemination)
- Technology Transfer Services/Licensing Management
- Cooperation agreement and innovation (research, human resource, expert and others.)
- Market survey, Technology transfer initiation, etc

# function (1) : Technology Transfer Office



## Function (2)

### ❖ Science and Technology Park

- ❖ Serve as a Hub: Government, Universities, Research Institutions & industries;
- ❖ Industry facilitation: MSMEs, Startups
- ❖ Business Incubation:
  - ❖ Digital/Creative Economy, Industry 4.0
  - ❖ Biotechnology, Chemistry, Foods



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# LIPI C-STP Infrastructure Development (2015 – 2020)



2019  
Tenant Building C-  
STP



2019  
Pilot Plant 3



2016-2018  
Pilot Plant 1&2



2020  
Convention Center & Coworking Space



2013-2015  
Innovation Office  
Building

# What we do

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Infrastructure Provision

Workshop/Pilot Plant and Industry Facilities

Technology Transfer

IP Management  
License Management

Incubation (Start Up/MSMEs)

Business Mentoring  
Trainings/Workshop

Industry Facilitation

Shared Industry Facilities



# What we do

Infrastructure  
Facilitation

Workshop, Pilot plant,  
Shared facilities



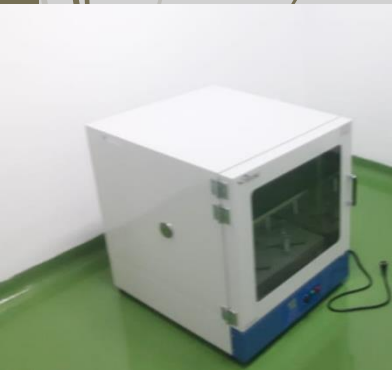
Alih teknologi

IP Management,  
Licensing

Incubation (Start  
Up/UMKM)

Business Mentoring,  
Training, workshop





## Pilot Plant 1

- Food and Beverage Processing Industry
- Halal Test

## Pilot Plant 2

- Industry 4.0
- Bio Industries

## Pilot Plant 3

- DNA Sequencing Centre
- IVD

## IP Management

### IP Facilitation



Patent Registration



Patent Certificate  
Payment



Patent  
Maintenance  
Facilitation



Facilitation of  
Patent  
Improvement

### IP Valuation



Intangible  
Assets  
Valuation



Technology  
Valuation

## Transfer Technology

IP  
Analysis/License  
/Industry  
Facilitation

Technology  
Promotion

Incubation  
Selection

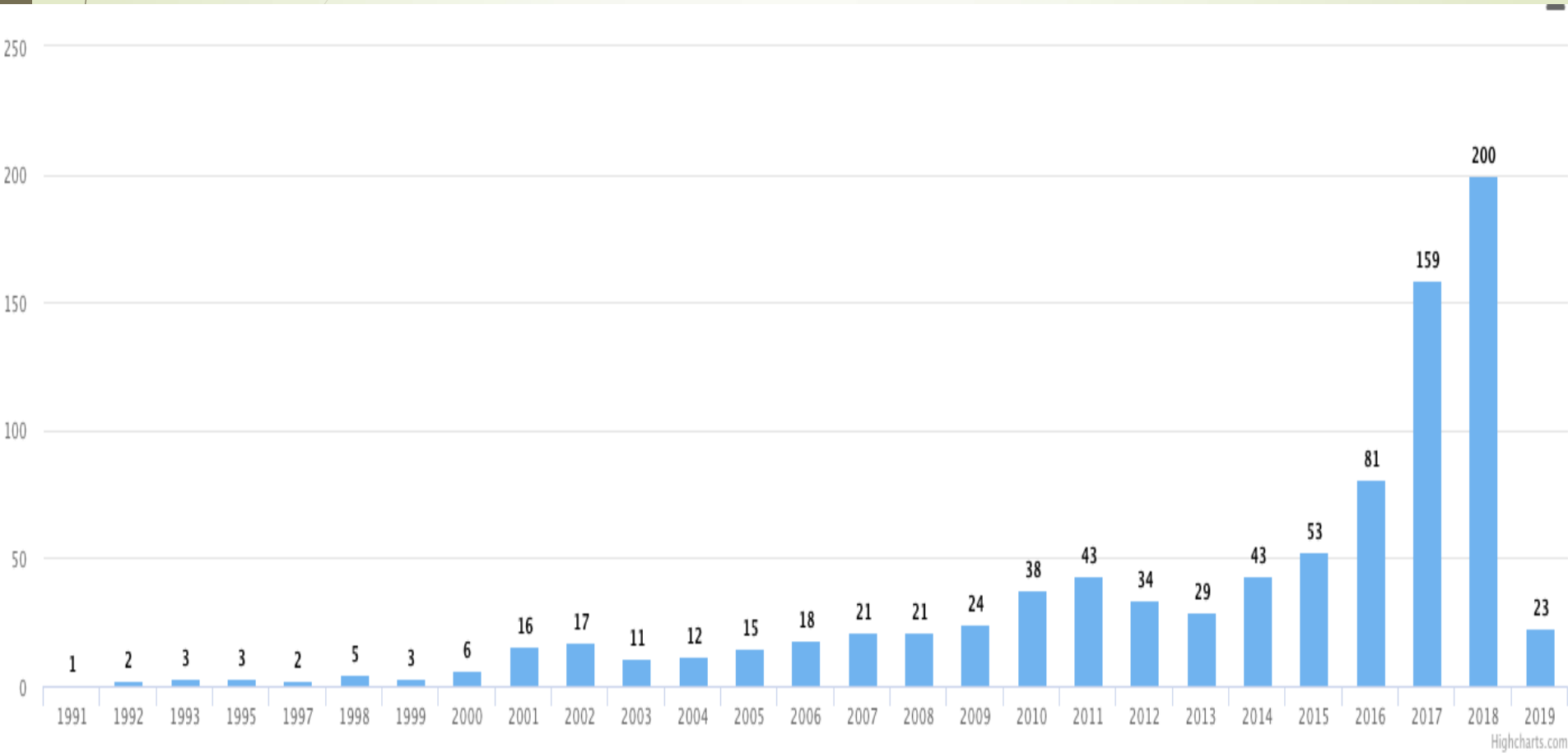
Facilitation of  
Collaboration

License  
Management

- Potency analysis
- Cooperative contract,
- Payment & reward
- evaluation

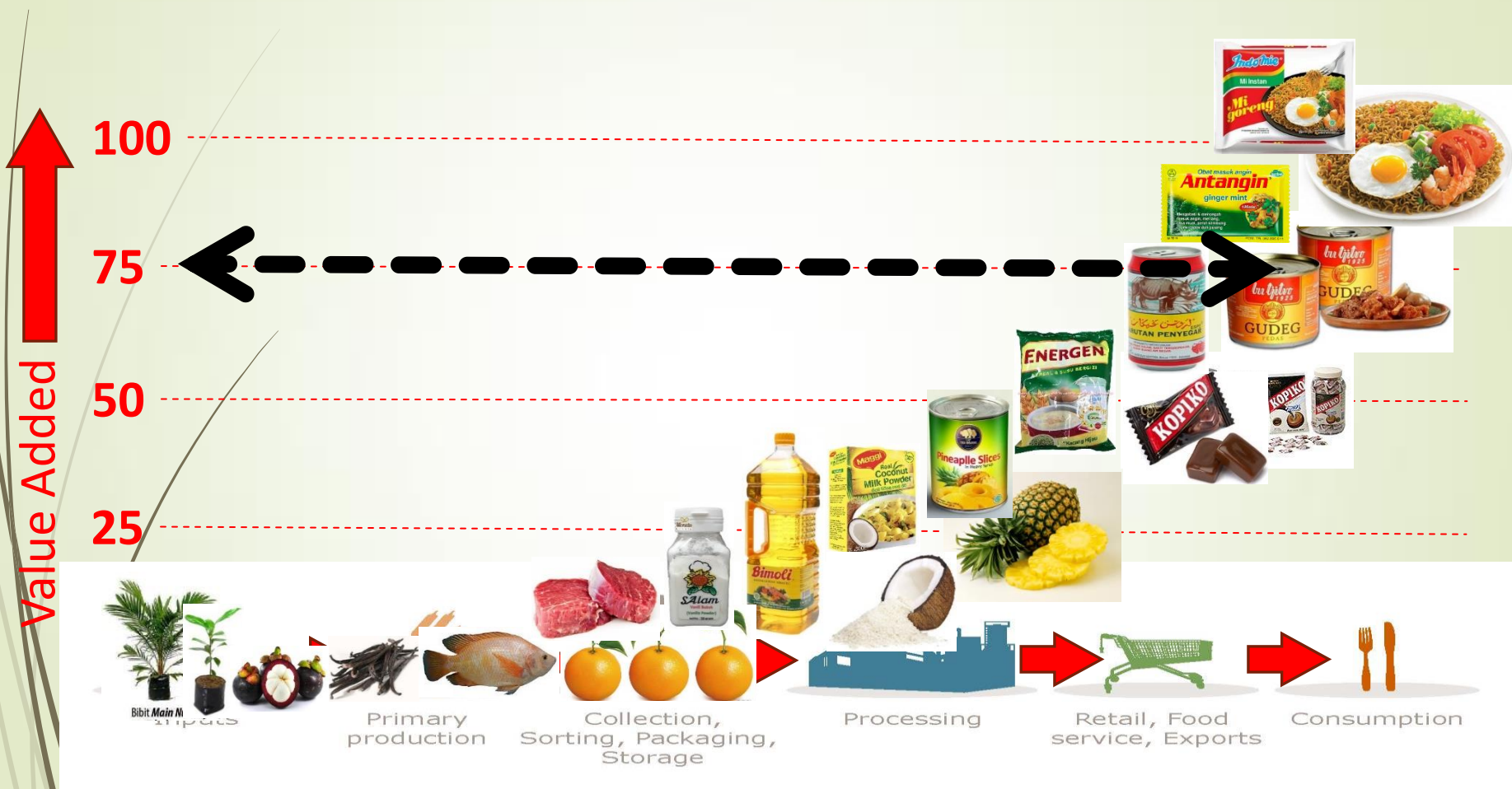
# Number of Patents (1991 – April 2019)

13

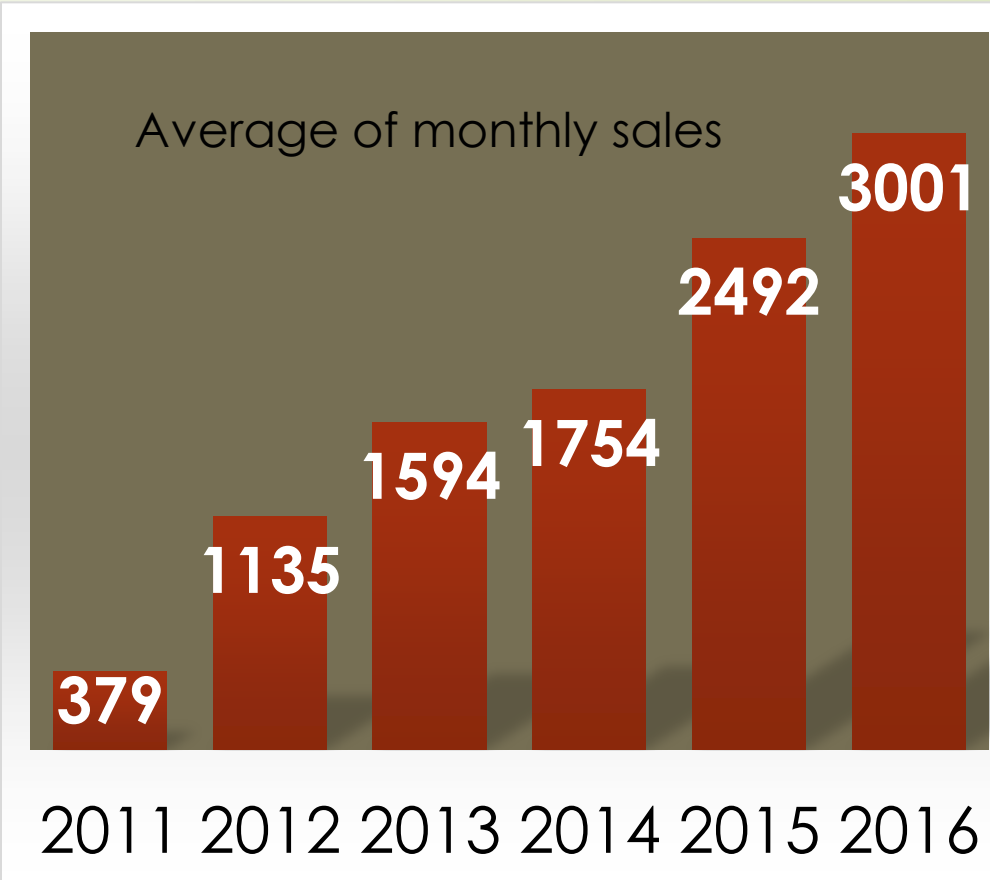


# Transfer of Technology to SMS (Case of Indonesian Traditional Food)

## INDONESIA AGRO-FOOD PRODUCTS

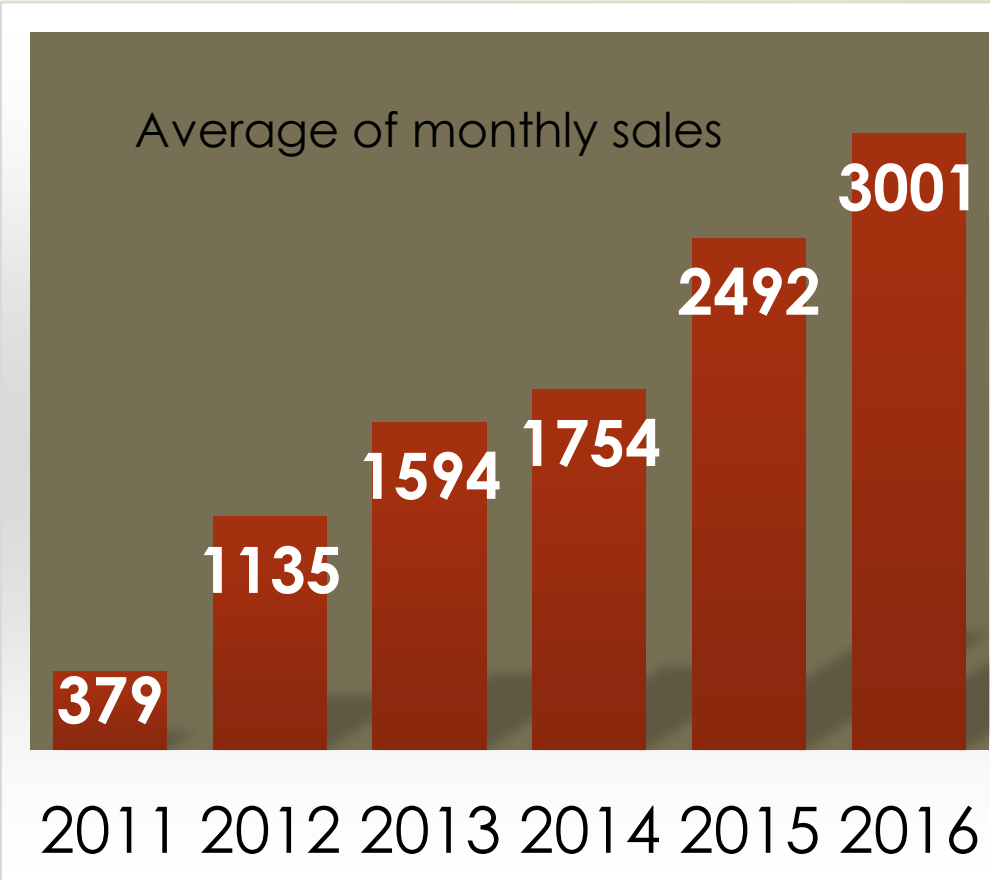


## Gudeg Bu Tjitro 1925



1. **Raw material characterization** --> Heat sufficient (F0 value)
2. **Standar Analysis** (Physic, Chemistry, Contamination of metal and Microbiology)
3. **Stability testing**

## Gudeg Bu Tjitro 1925



Why it is success:

- Help SME to expand their market
- Sale as souvenir → Tourism
- Liked by politician → good for researcher 😊

# Number of IPR of Indonesian Institute Sciences

17

▶ Patent	: 883
▶ Copy Right	: 55
▶ Trade mark	: 31
▶ Industrial Design	: 20
▶ PVT	: 10
<b>TOTAL</b>	<b>: 999</b>



# Technology transfer by Licensing

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- **Patent Licensing** : 18 patent + 1 trade secret
- **Licensee:**
  - Fertilizer industry
  - Cosmetic Industry
  - Building material industry
  - SMEs
  - Food industry
  - Healthcare industry
  - Others

# Product Licensed

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- Liquid Organic Fertilizer
- Pesticide
- **Cellular Lightweight Concrete**
- Wood Bending
- Flower Varieties
- Cervical Cancer Detection Kit
- Nano Particle Based on Herbal
- Anti Cellulite
- Radar Surveillance System
- Needle Destroyer
- Tempeh Inoculum



## IP PORT

Interconnection of Intellectual Property  
Management of Institutions, Universities and  
Other Stakeholders to Create A Better  
Indonesia

# IP-PORT BASED IP MANAGEMENT PARTNERSHIP

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# Potential Licensing Partnership

No	Technology	Research Centre	Partner	Progress
1.	Probiotics for livestock & shrimp	Research Center for Biotechnology	CV. Mandiri Farm	MoU signed
2.	Wooden Bicycle	Research Center for Biomaterials		Talks initiated
3.	Biopellets	Research Center for Biomaterials		Talks initiated
4.	Needle Destroyer	Research Center for Physics	PT Kimia Farma	
5.	Sea Cucumber Cultivation	Marine Bio Industry		Talks initiated
6.	Ball Milling	Research Center for Physics	CV. Fila	Under review
7.	Book Publishing Rights	LIPI Press	Springer	Under review

# Potential Licensing Partnership

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No	Technology	Research Centre	Partner	Progress
8	Bomb Disposal Robot	Research Center for Electrical Power and Mechatronics		Under review
9.	Monascus	Research Center for Biology	PT. Royal	In negotiation
10.	Anti-obesity drink	Research Center for Biology	Air Mancur	In negotiation
11.	Concrete and Brick Crack Repair (Self Repair)	Research Center for Biology	Semen Padang	In negotiation
12.	Biological Organic Fertilizer	Research Center for Biology	PT. Pupuk Kaltim	In negotiation
13.	Cervical Cancer Detection Kit	Research Center for Biotechnology	PT. Phapros	Clinical trial

# Current LIPI's IP Users

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No	Partner	Technology
1.	PT. INDEC DIAGNOSTICS	A Kit for Detecting Human Papiloma Virus (HPV)
2.	PT.LINGGA HSB ABADI	Biological Organic Fertilizer and The Making Process
3.	PT. MAJU MAKMUR UTOMO	Biological Organic Fertilizer and The Making Process
4.	PT. AGRITEK TANI INDONESIA	Utilization of Bioside Formulation Technology Made from Neem Oil for Agricultural Pests
5.	PT. AGRITEK TANI INDONESIA	Biological Organic Fertilizer and The Making Process
6.	PT. ANUGRAH MUSTIKA OSTINDO	Composition of Soil Improvement
7.	CV. PUTRA LINGGA JAYA	Wood Bending Technology

# Current LIPI's IP Users

25

No	Partner	Technology
8.	PT. MOELIA GRAHA ESTETIKA	Composite Board from Natural Fiber as Vertical Gardening
9.	PT. DEDIDISEMA AGUNG SEMESTA	Cellular Lightweight Concrete
10.	PT. GIZI INDONESIA	Herbal Based Nanoparticles
11.	Koperasi Nabati Lestari	Plant Breeding of Hoya Kusnoto
12.	Koperasi Nabati Lestari	Lipstick Soeka of Lipstick Soeka
13.	PT Tekno Pamulang Jaya	Composition of Soil Improvement
14.	CV. PUTRA LINGGA JAYA	Block Paving



# Current LIPI's IP Users

26

No	Partner	Technology
15.	PT Tesena Inovindo	Needle Destroyer Technology
16.	PT. INTI	Technology of Surveillance Radar Systems
17.	PT Buana Multi Tekindo	Needle Destroyer Technology
18.	PT. Nanotech Herbal Indonesia	Herbal-Based Anti-Cellulite Products and the Manufacturing Process
19.	PT. Sandar International	Biopesticide

# TRANSFER TECHNOLOGY

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# INCUBATION PROGRAM

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No.	Program	Partner
1.	Co-incubation Laser Indonesia	Ministry of Research, Technology and Higher Education
2.	Co-incubation startup First Drink	Indonesian Al-Azhar University
3.	Incubation Tenant Selection	Japanese Incubator (Leave A Nest)

No.	Program
1.	Workshop 'Creative Packaging Design'
2.	Workshop 'Protecting and Registering Your Brand'
3.	Workshop 'ISO Management System Standards'
4.	Workshop 'Traditional Herbal Medicines Processing Facilities'

# INCUBATOR TENANTS

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No.	Tenant	Business Product
1.	Startup Liquid Waste	Liquid Waste
2.	PT. Salam Medina Teknologi	MSEMs Marketplace
3.	Startup Sensolution	Consumer Research Analysis
4.	PT. Maxymum Tekno Lestari	Waste Management Application
5.	PT Noveltindo Eiyو Technoprima	Animal Feed Probiotics
6.	Startup First Drink	Drinking Water
7.	PT Yasa Jamur Sriwijaya	Mushroom Food

No.	Tenant	Business Product
8.	CV Bintang Haluan Utama	Rendang (Indonesian Traditional Food)
9.	Startup Dapur Mama Eza	Rendang (Indonesian Traditional Food)
10.	Rendang Fitri	Rendang (Indonesian Traditional Food)
11.	CV Imaji	Animation
12.	PT Shing Sukses Abadi	Animal Feed Probiotics
13.	Startup Multi Laser Indonesia	Laser Co2
14.	CV 3 Serangkai	Plant Tissue Isolation Method

No.	Tenant	Business Product
15.	CV Hanecomma	Cosmetics Ingredients
16.	PT Redo	Porridge Machinery Production
17.	CV Bhumi Rasa	Organic Rice Vinegar

# INDUSTRY FACILITATION

Spectrophotometer



Laminar flow cabinet



Fermenter



HPC



Evaporator



Spray dryer



Freeze Dryer



Incubator Shaker



autoclave



Centrifuge



MS-Pusc

# START UP INCUBATION THROUGH CLUSTER DEVELOPMENT IN C-STP

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The Indonesian Creative Economy Agency  
(BEKRAF)

Smart Farming  
and Fishery

Functional  
Foods

Economic and  
Creative Digital,  
Industry 4.0

Biochemicals,  
Medical  
Devices



Ministry of Industry of Republic of Indonesia  
**Denpasar Industrial Training  
Center**





# START UP INCUBATION THROUGH CLUSTER DEVELOPMENT IN C-STP

34

## FOOD & DRINKING PROCESSING AND FACILITIES

Spray dryer



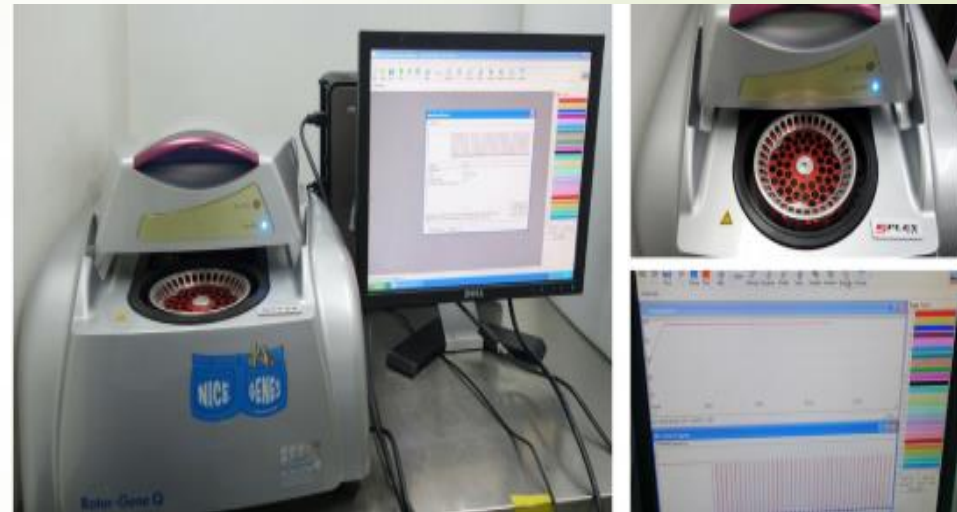
Freeze drying



Exhausting



## HALAL LABORATORY TESTING



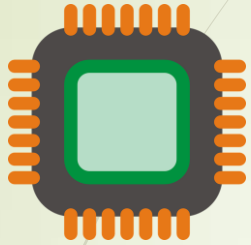
Real-time PCR



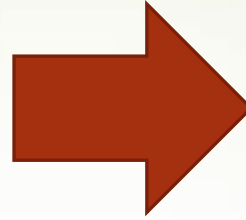
# START UP INCUBATION THROUGH CLUSTER DEVELOPMENT IN C-STP

35

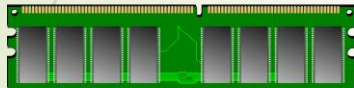
## High Performance Computing Facility



**2648  
cores**



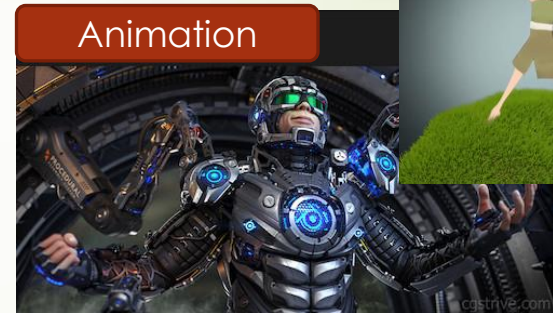
**Equivalent:  
662 PCs**



**13.5 Tera  
Bytes**



**3.18 Peta  
Bytes**



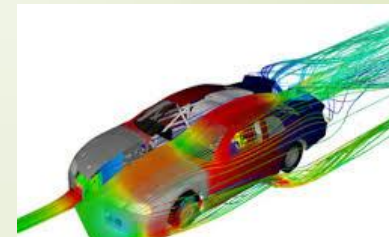
**Start Up, MSME**

Animation studio,  
Engineering Consultant,  
Software, IT Security



**Stakeholders**

University, Vendors,  
Industry Associations,  
Gov. institute: BDI,  
Bekraf, LAPAN, BATAN,  
BMKG



**Computational  
Fluid Dynamics**

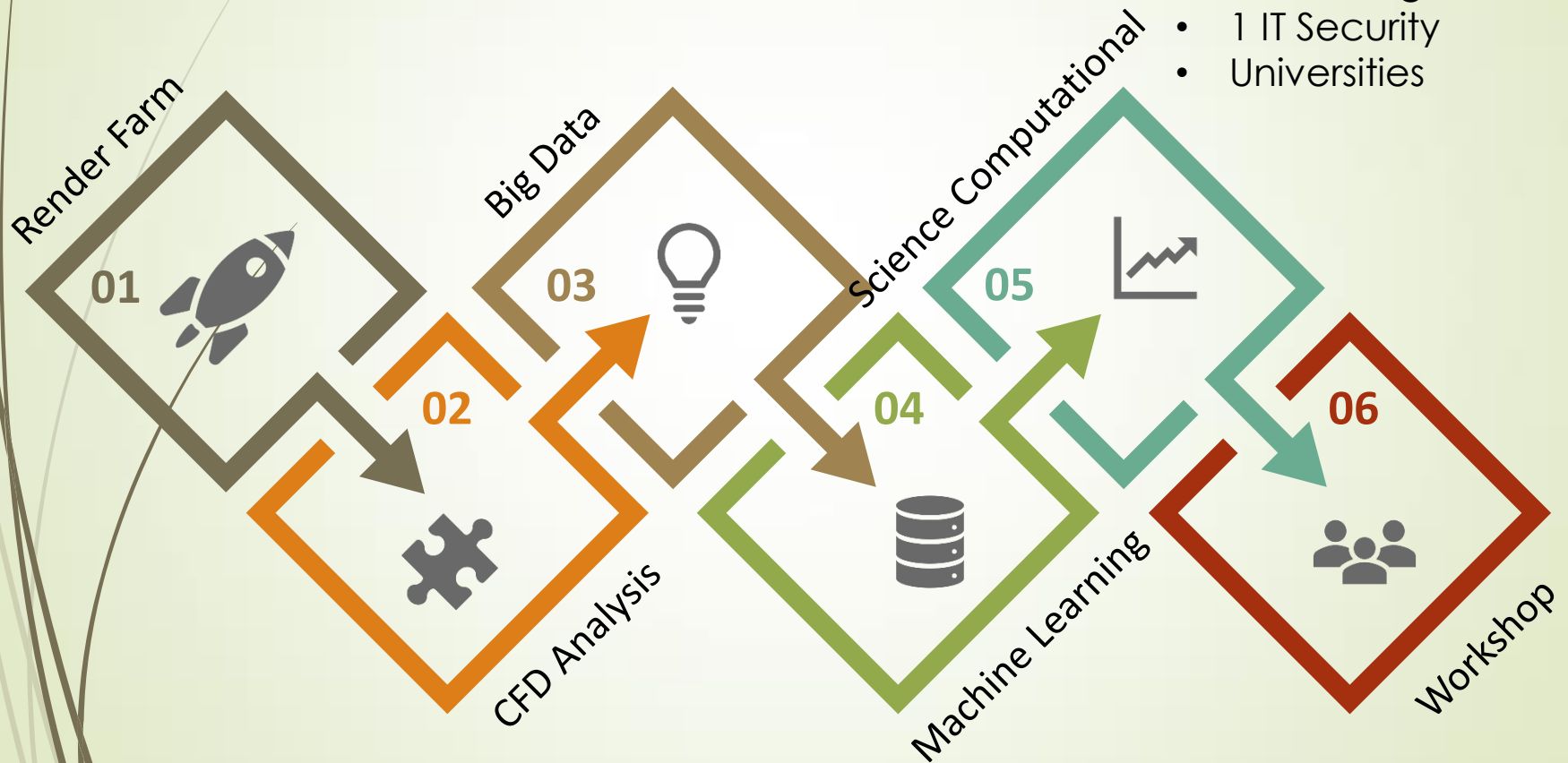
# START UP INCUBATION THROUGH CLUSTER DEVELOPMENT IN C-STP

## High Performance Computing

(<http://grid.lipi.go.id/>)

Tenant/user:

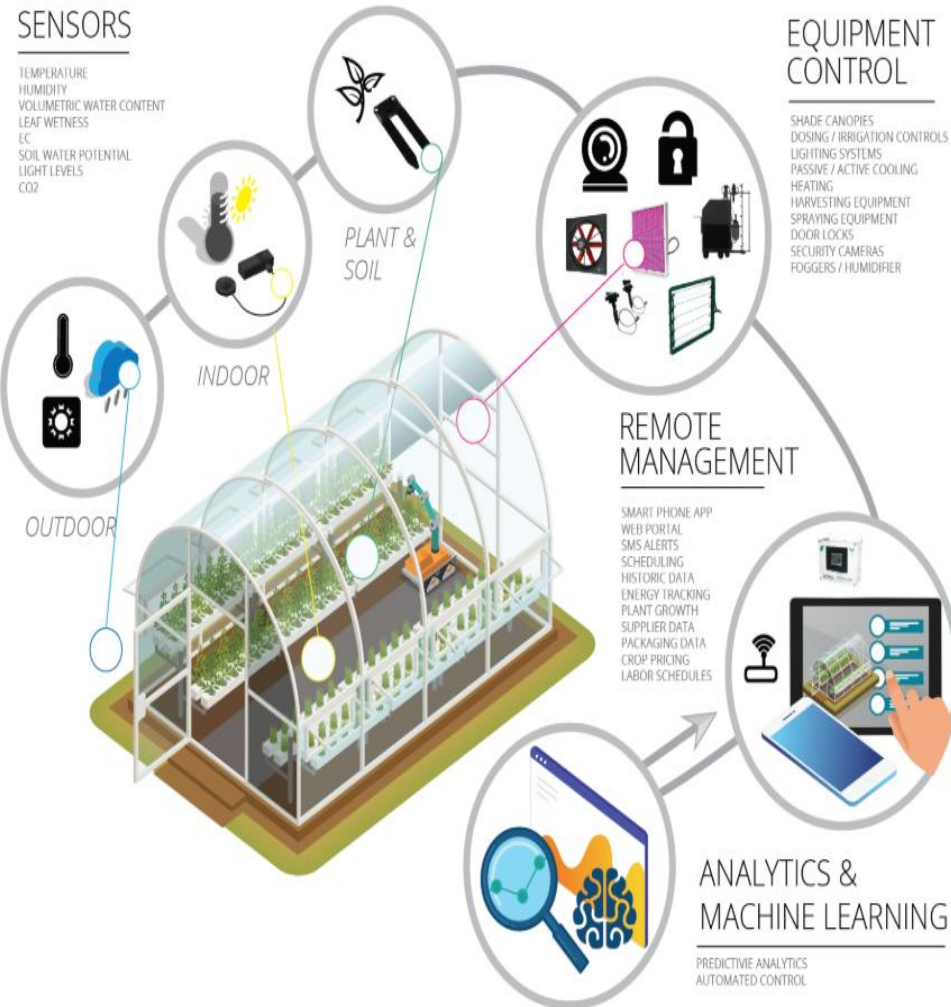
- 5 Animation Studios
- 1 Oil & Gas Consulting
- 1 IT Security
- Universities



# START UP INCUBATION THROUGH CLUSTER DEVELOPMENT IN C-STP (Plan)

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## Realtime Monitoring and control



## Smart Farming



Pre-Production Room



Production Room



Greenhouse



Storage Room



# International Partnerships

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PPII LIPI – CATTTC (China-ASEAN Technology Transfer Center)

- ❖ **Jointly carrying out China – Indonesia technology cooperation and transfer under ‘Indonesia – China Technology Transfer Center (ICTTC)’**
- ❖ **Implementing activities such as sci-tech exhibition and business match making that will be held jointly on October 23<sup>rd</sup> – 26<sup>th</sup> 2019 at the event of Indonesia Science Expo 2019 at Tangerang, Banten, Indonesia**
- ❖ **Promoting collaboration between technology – based startups, technology business incubators, technology transfer intermediaries, and STP in Indonesia and China**

# International Partnerships

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PPII LIPI – CATTTC (China-ASEAN Technology Transfer Center)

- ❖ **Establishing and facilitating the exchange of information technology needs and demands of enterprises, universities and research institutes from both countries**
- ❖ **Offering opportunities for exchange of technical staff, technical training and management training in technology transfer**
- ❖ **Conducting research and demonstration of technical localization**

# International Partnerships

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PPII LIPI – JASTIP (Japan – ASEAN Science Technology Innovation Platform)

- ❖ **Jointly carrying out 2<sup>nd</sup> International Business Matching 2019 of Indonesia Science Expo 2019 in Indonesia on 23<sup>rd</sup> – 26<sup>th</sup> October 2019**
- ❖ **Promoting research and capacity building by developing joint laboratories and producing scientific outcomes, publishing internationally co-authored scientific papers and obtaining patent**
- ❖ **Establishing platform for science, technology and innovation collaboration**

# International Partnerships

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PPII LIPI – BEKRAF (Indonesian Agency for Creative Economy)

- ❖ **Internationalization of animation studios by making resources collaboration**
- ❖ **PPII provides digital industry infrastructure:**
  - ❖ **Render farm, recording studio, training facility**
- ❖ **BEKRAF provides other supports**
  - ❖ **conferences, expo, workshop, pitching, etc.**



**THANK YOU**