LEMBAGA ILMU PENGETAHUAN INDONESIA
(INDONESIAN INSTITUTE OF SCIENCES)

LIPI

Nanotechnology Business Incubation for Commercial Products – Strategy and Best Practices

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Indonesian Institute of Sciences (LIPI)

LIPI Science & Technology Park

INDONESIA NATIONAL SCIENCE & TECHNOLOGY PARK PUSPIPTEK, SERPONG

CIBINONG SCIENCE CENTER

CENTER FOR INNOVATION

www.lipi.go.id

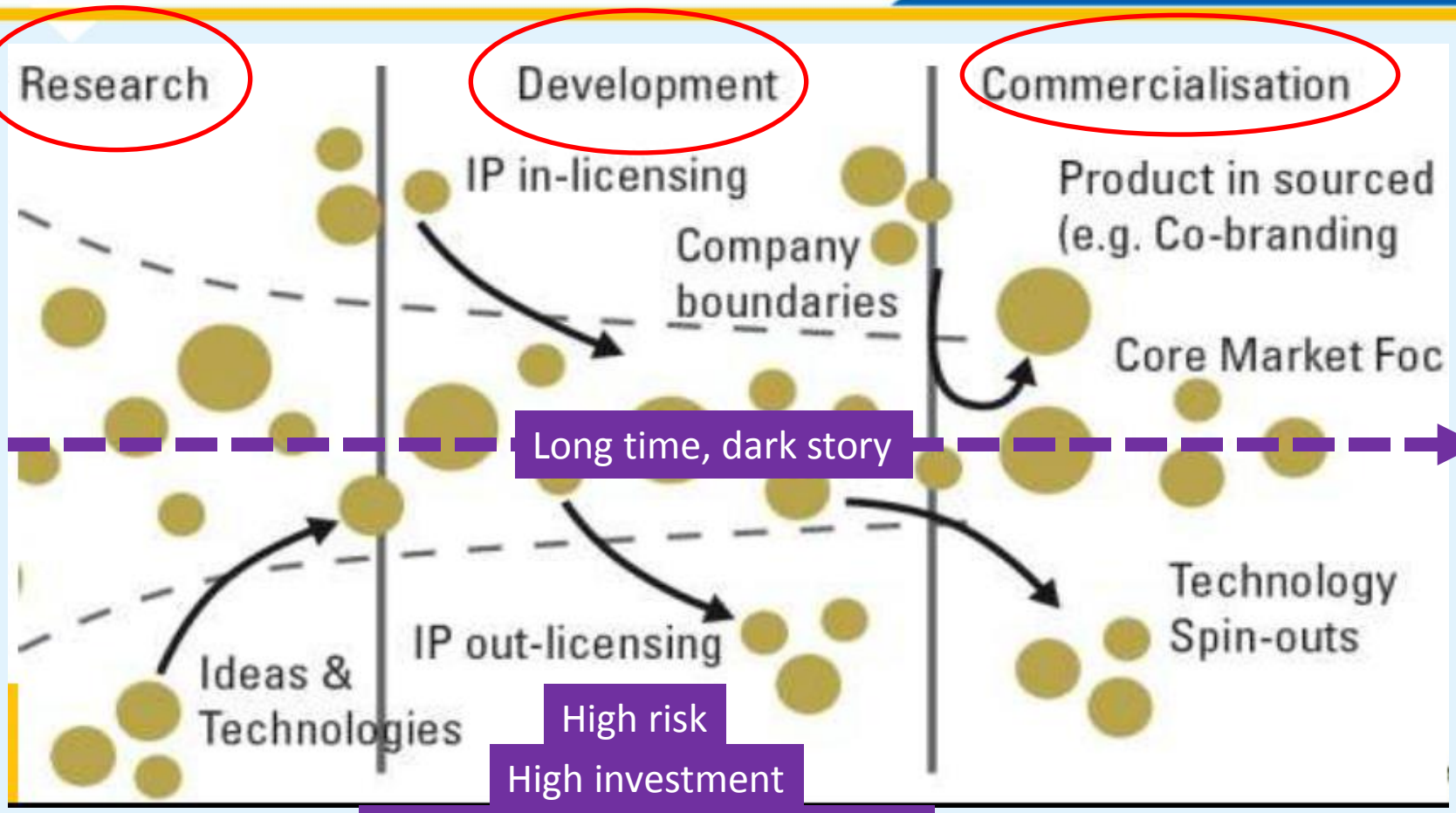
Main Target of Cibinong S&T Park

40	• Technology based Start Up Company
25	• Lisence of LIPI technology to industries
66	• LIPI Product used by SME and/or community
550	• Human resources trained by LIPI Technology
100	• New labor opportunity
1	• Pilot Plant for Food Production

Roadmap of LIPI S&T Park

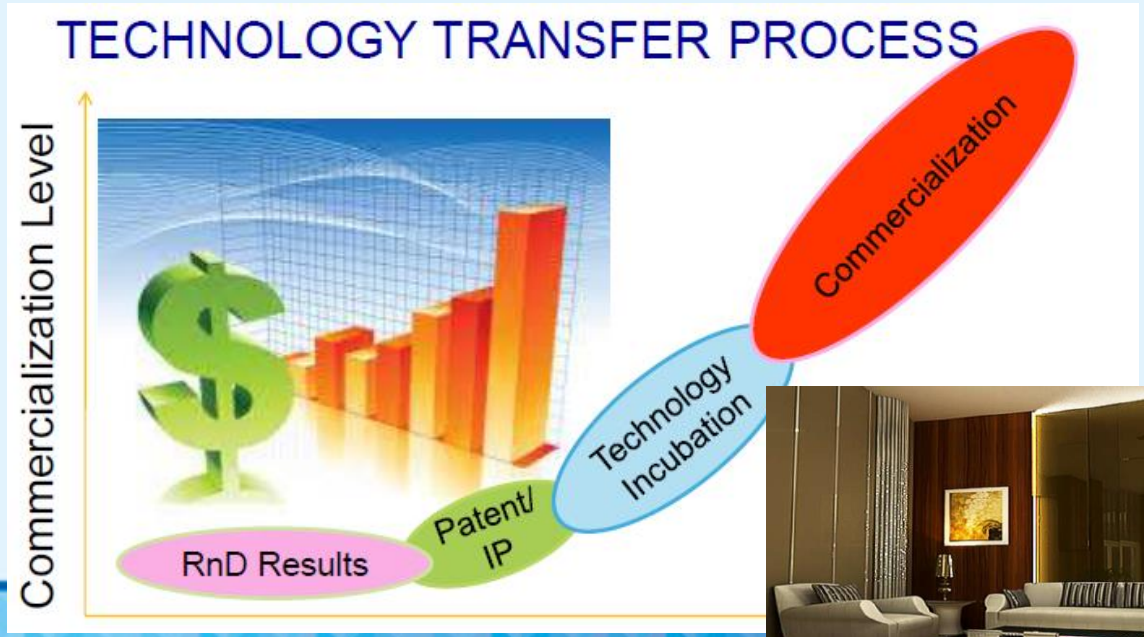
2015	2016	2017	2018	2019
• 7 start-up • 3 licenses • 11 products • 150 trained HR • 1 Planning for pilot plant	•7 start-up •5 licenses •11 products •150 trained HR •20 new labor •1 pilot plant building	•7 start-up •5 licenses •14 products •160 trained HR •25 new labor •1 pilot plant building	•9 start-up •6 licenses •14 products •160 trained HR •25 new labor •1 pilot plant building	•10 start-up •6 licenses •14 products •180 trained HR •30 new labor •1 pilot plant building

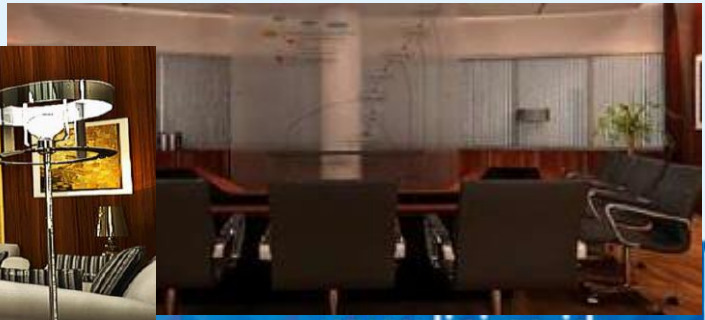
Research, Innovation and Commercialization



Technology incubation: tenant

Office: 24 m2 (Total 20 rooms)
Rental fee: 35 USD/ month
Facilities: tables, chair, AC, wifi,
Lounge, meeting room, ballroom





Criteria for Tenant selection

- High added value technology
- New Technology
- Potential market
- High Growth Potential
- Should immediately can be delivered to market
- Budget rationality

TECHNOLOGY BUSINESS INCUBATOR

FOSTERING Start Up Company (1)

INVENTOR→ NEW TECHNOLOGY

POTENTIAL MARKET→SEED MONEY 1 →SAMPLE PRODUCT

CENTER FOR INNOVATION

STRATEGIC PATNER

TECHNOPRENEUR

→SYSTEM & BUSINESS MANAGEMENT

SEED MONEY 2 → →PRODUCT →CAPTIVE MARKET

BUSINESS PATNER

OUTPUT

→ Product sample that succesfully to be tested in the market
→ Captive Market
→ Early stage of business
→ Business Plan

FOSTERING Start Up Company (2)

TENANT/ START UP

Inventor, Technopreneur, Product, System, Business Management, Captive Market

ANGLE INVESTOR

Technopreneur, Networking, Seed Money (50,000 ~ 200,000 $US)

OUTPUT

→ There are production sites
→ Business has grown
→ Captive Market 10% of Target Business
→ Companies already established

FOSTERING Start Up Company (2)

Start Up

Inventor, Technopreneur, Product, System, Business Management, Captive Market
10 %

Ventur Capitalist

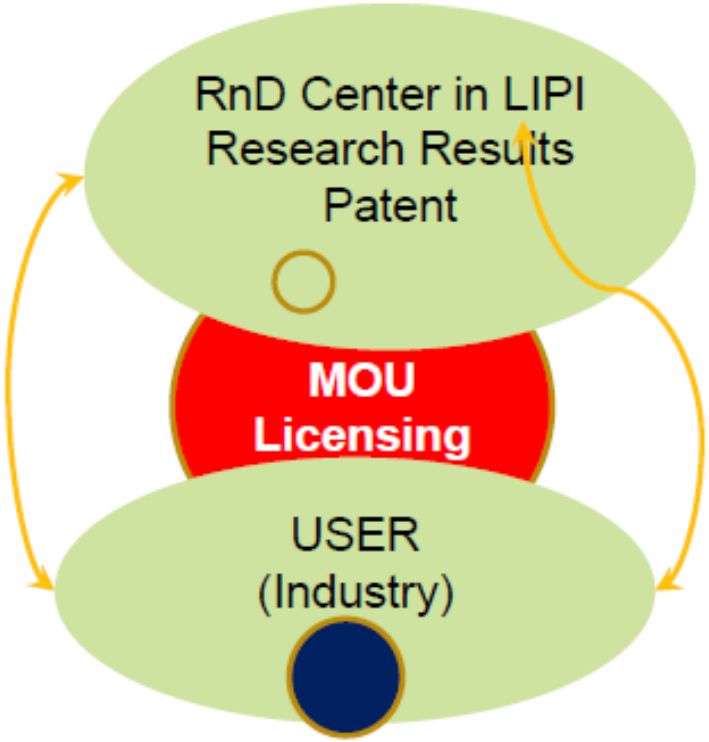
New Investment
(1 milion ~ 1 billion $ US)

OUTPUT
→Mass production
→Business expansion
→IPO

Technology Transfer (Model 1)

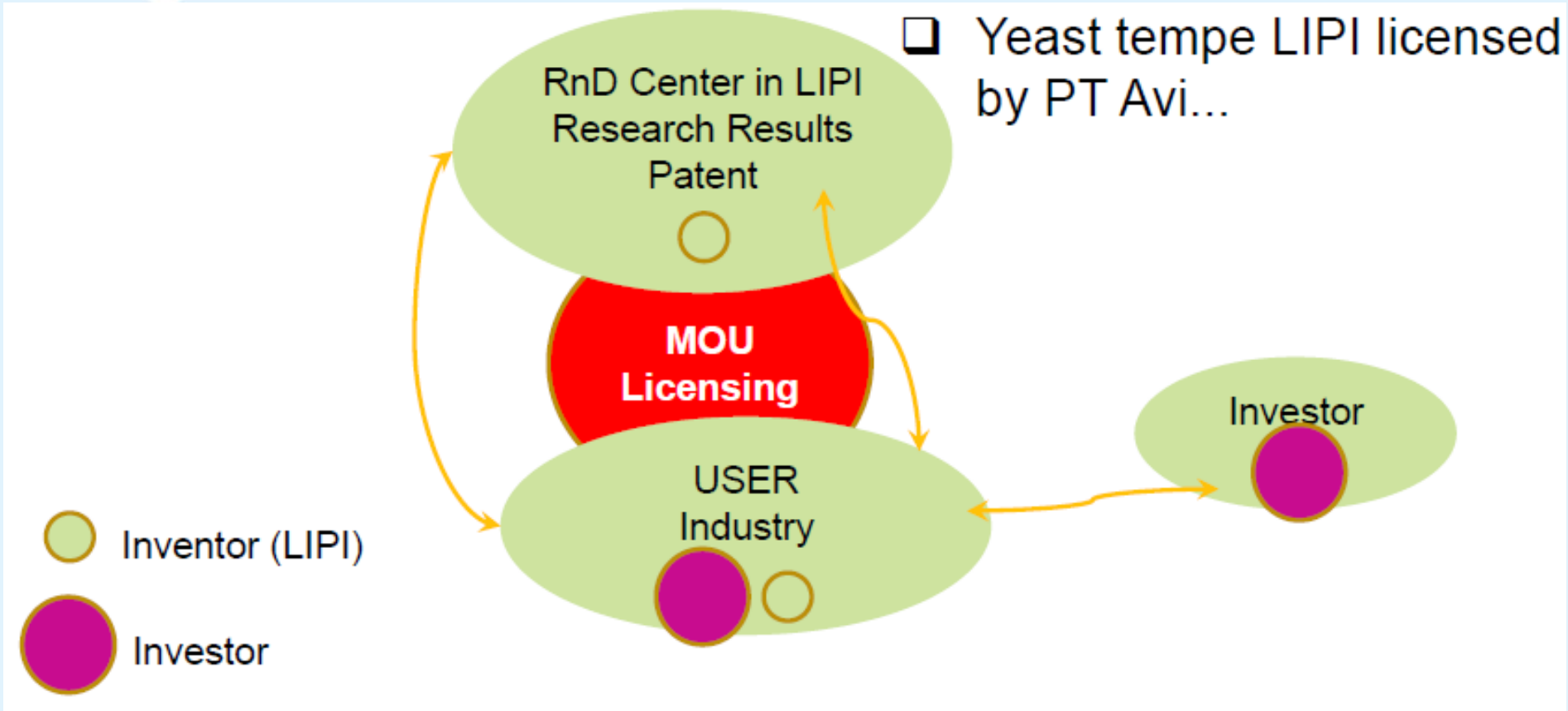
Inventor (LIPI)
Technopreneur

User/ Industry

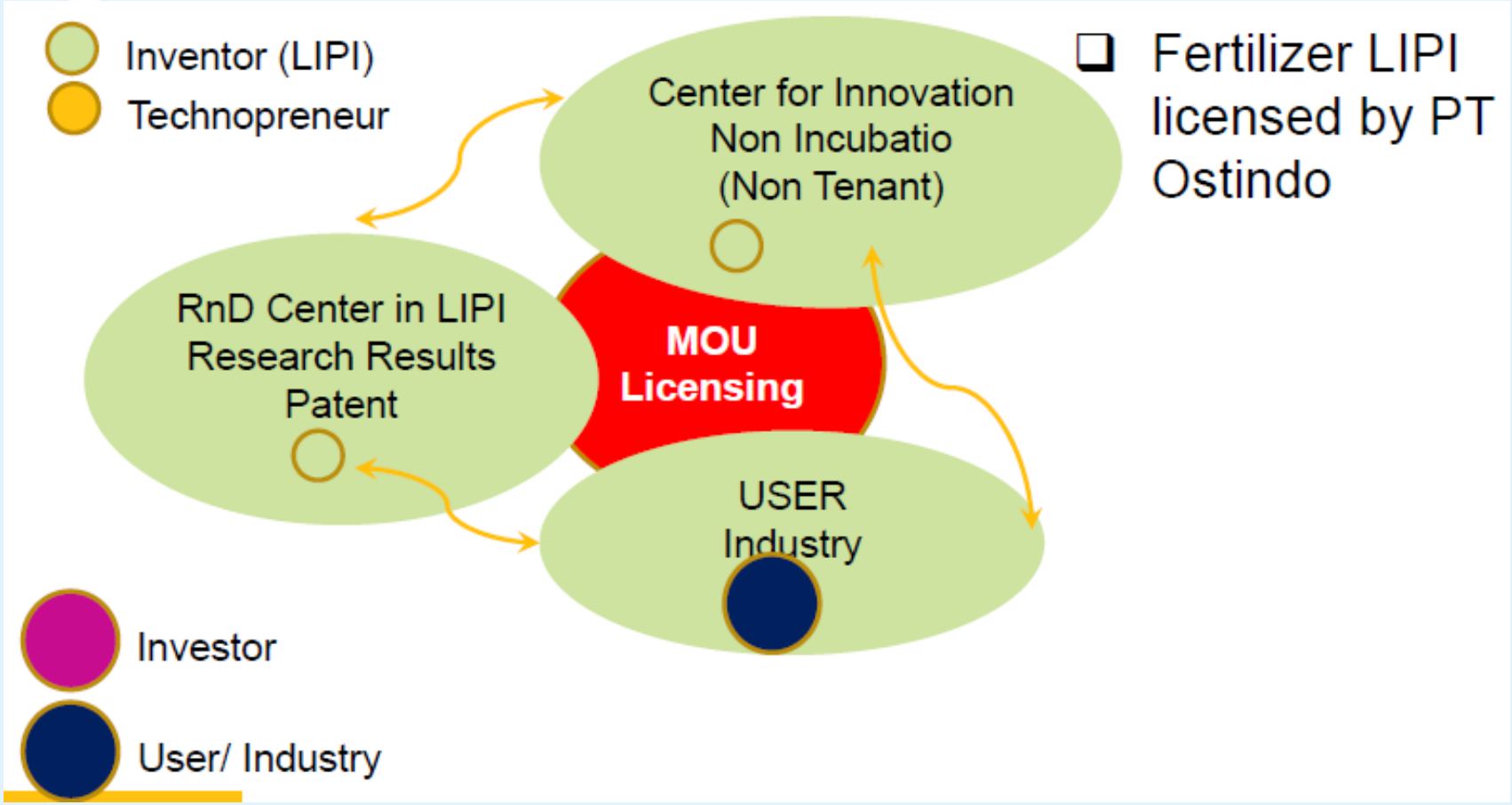


- Radar LIPI Licensed by PT INTI

Technology Transfer (Model 2)

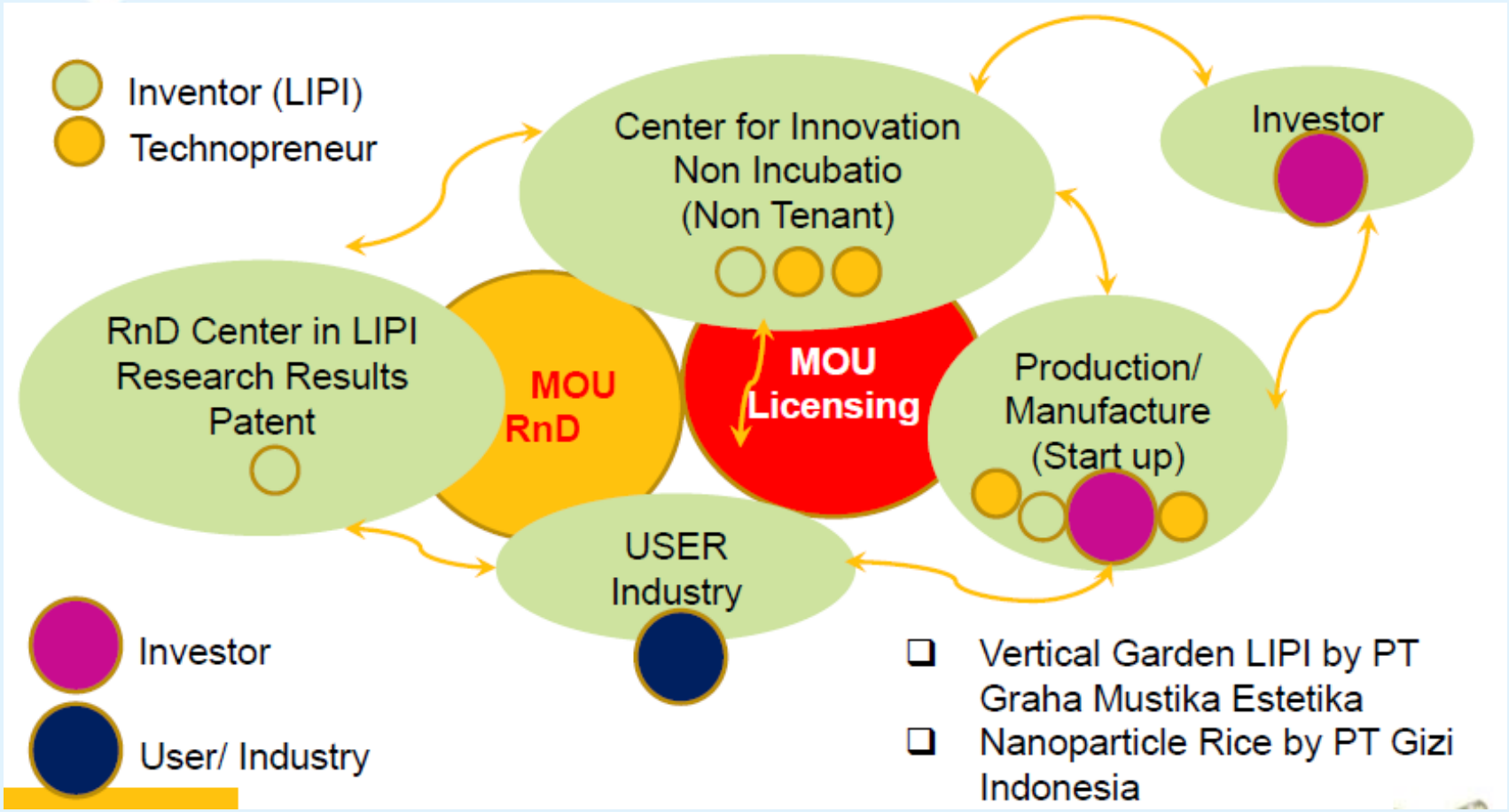


Technology Transfer (Model 3)

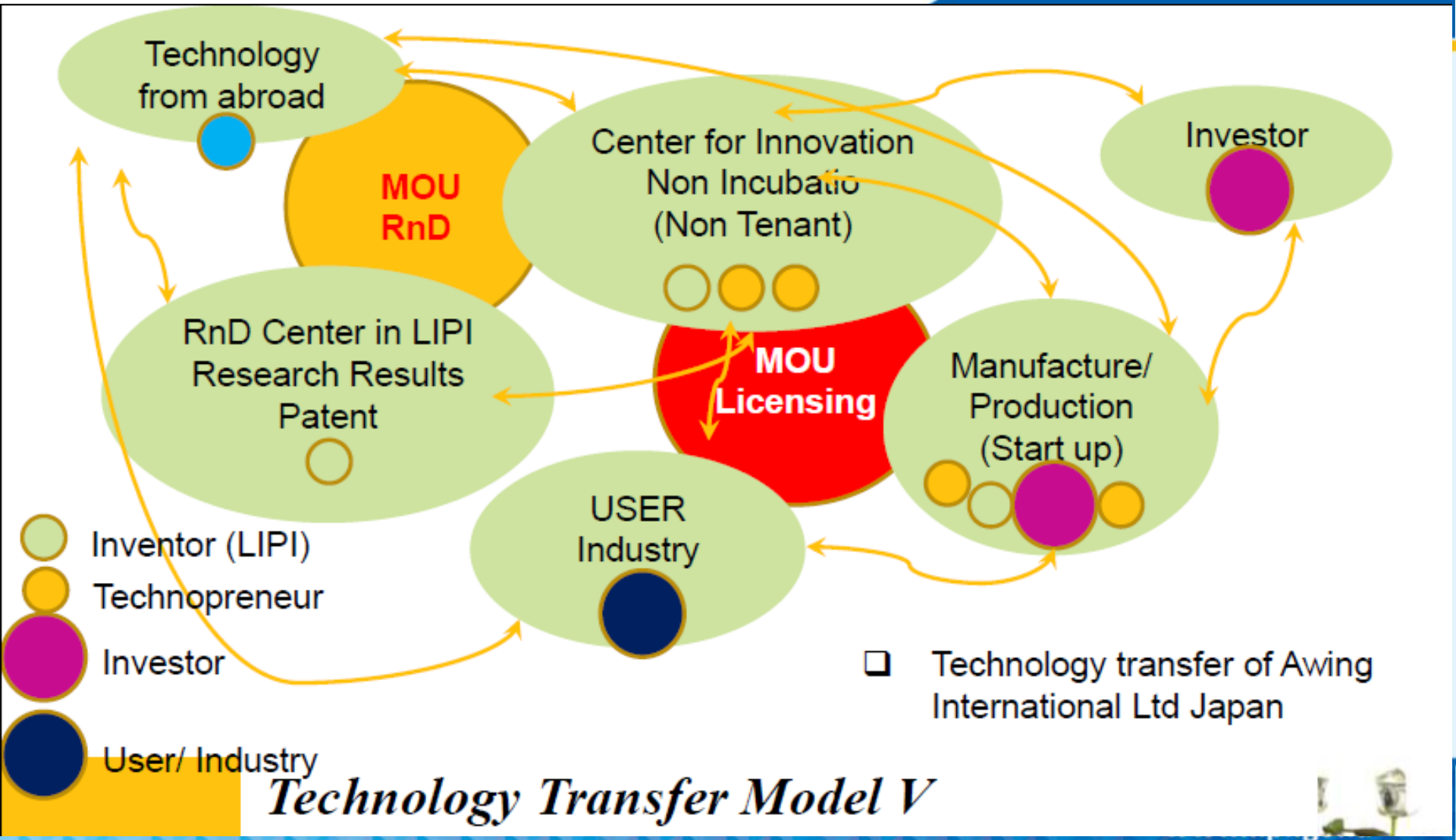


- Fertilizer LIPI licensed by PT Ostindo

Technology Transfer (Model 4)



Technology Transfer (Model 5)

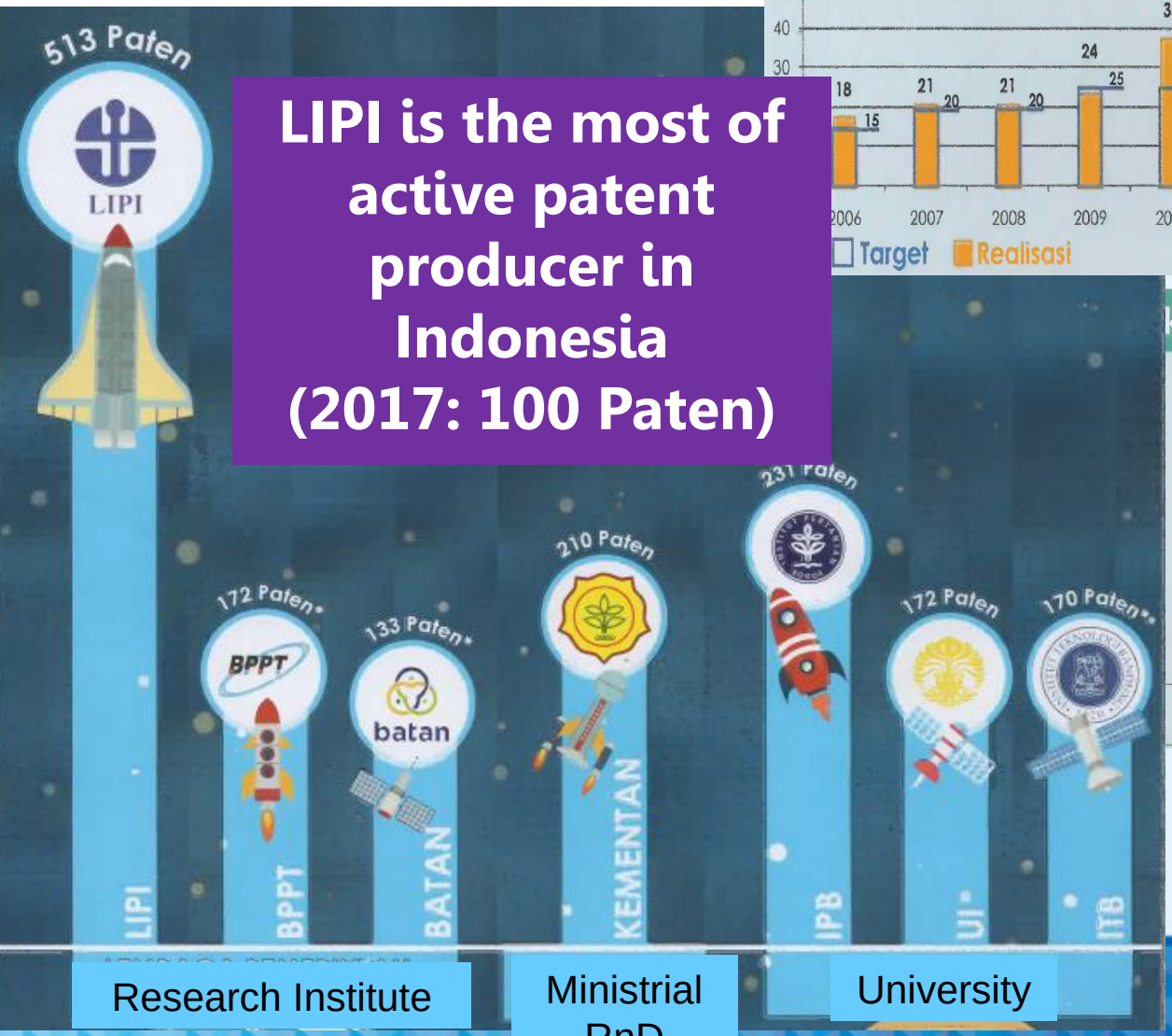


Technology Transfer Model V

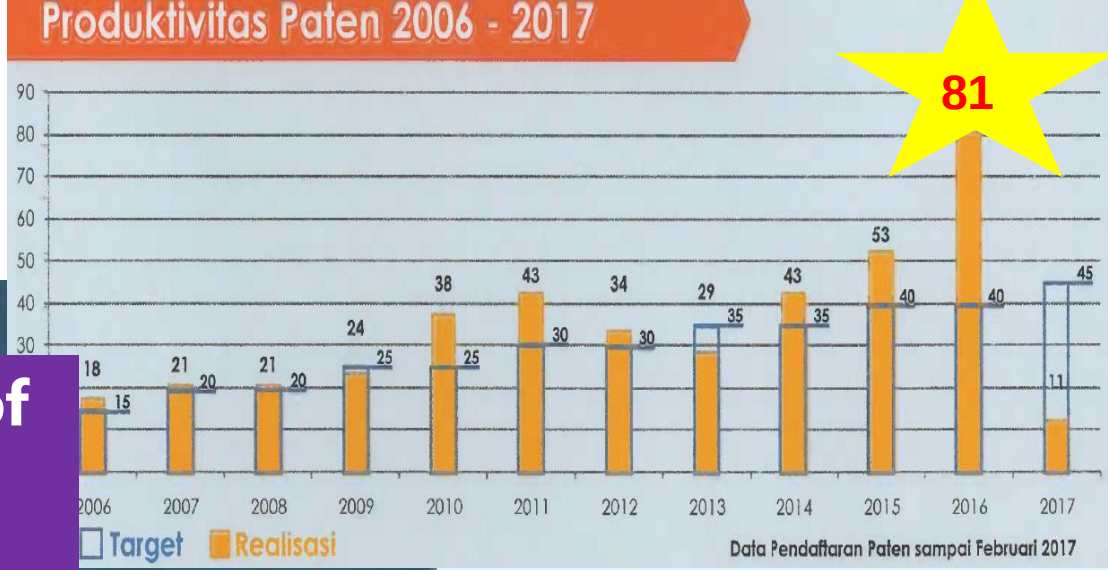
Technopreneurship Training for SME and investors

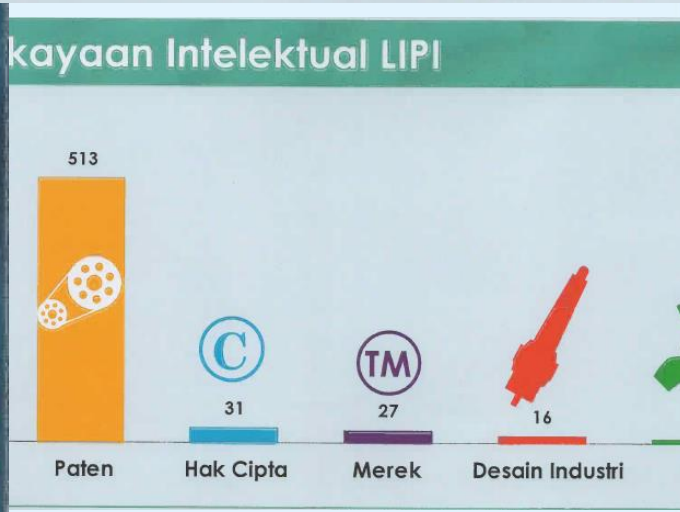
Business Meeting

PATENT



LIPI is the most of active patent producer in Indonesia (2017: 100 Paten)





Research Institute

Ministrial RnD

University

www.lipi.go.id

Patent Commercialization

Total number of patent produced by LIPI: 521 patent

521

Number of granted patent from LIPI for commercialization: 30 patent

30

Commercialized LIPI patent: 9 patent (30%)

9

Impact of Patent Commercialization

Impact of Licensed 9 patent:

1) License and royalty payment to LIPI: USD 0.5 million

2) Selling/ omzet of industries: USD 50 million

3) New jobs 90 people

Lisenced Technology to SME

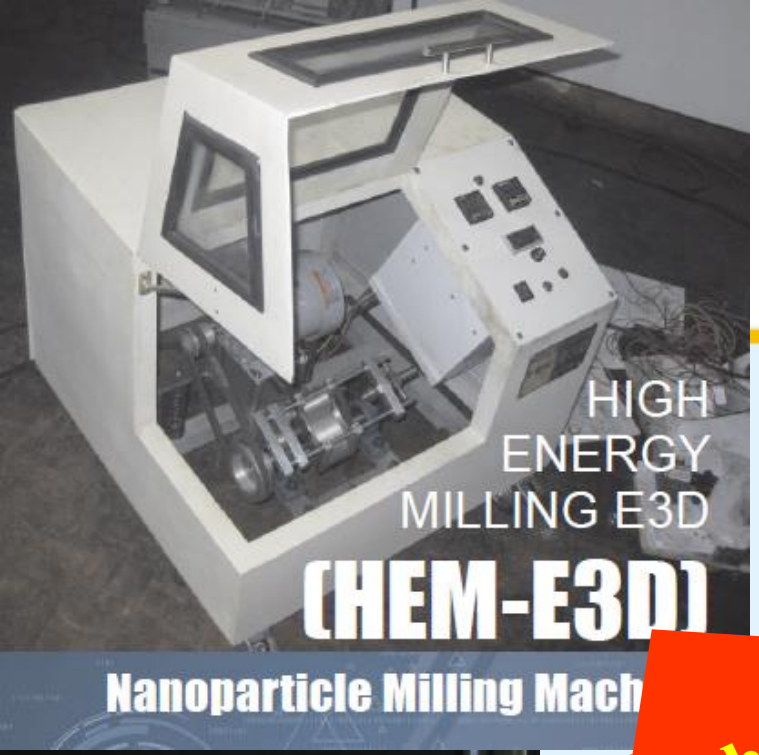
No	Licensed Technology	SME	Inventor
1	**Soil Conditioner**	PT. Anugerah Mustika Ostindo	Dr. Novik (RC Biology)
2	**Nanoparticle Herb Production Machine**	PT. Gizi Indonesia	Dr. Nurul TR (Ctr Innovation)
3	Lipstik Soeka Flower	Koperasi Nabati Lestari	Dr. Sri Rahayu (B Botanical Garden)
4	Lipstik Mahligai Flower	Koperasi Nabati Lestari	Dr. Sri Rahayu (B Botanical Garden)
5	Hoya Kusnoto Flower	Koperasi Nabati Lestari	Dr. Sri Rahayu (B Botanical Garden)
6	***Cellular Lightweight Concrete***	PT Dedidisema Agung Semesta	Ananto Nugroho, MT. (RC Biomaterial)
7	**Composite Panel from natural fiber as vertical garden**	PT. Moelia Graha Estetik	M.Gopar, ST. (RC Biomaterial)
8	Organic Fertilizer	PT. Maju Makmur Utomo	Dr. Sarjiya Antonius (RC Biology)
9	Organic Fertilizer	PT. Agritek	Dr. Sarjiya Antonius (RC Biology)

Technology Based Start up Company

NO	sTART UP COMPANY
1	**PT. Tritunggal Prakarsa Global**
2	PT. Nusantara Pangan Merdeka
3	**PT. Nanotech Inovasi Indonesia**
4	PT Media Parasia Sehat
5	Japan Sorghum, Co.Ltd
6	**PT. Panen Energi Indonesia**
7	CV. Multi Guna Teknologi
8	**CV. Microlife Technology**
9	CV. Rumah Usaha Bersama
10	CV. Media Sarana Usaha
11	**PT. Labo Chemi Indonesia**
12	PT. DNR International
13	PT. Bolmong Cantika Jaya
14	CV. Maranti
15	PT. Awina Sinergi Indonesia
16	**CV Fisika Laboratoria**
17	**PT. Moelia Graha Estetika**
18	CV Bahtera Perkasa
19	PT. Pala Agri Indonesia
20	PT. Healthy Foody Indonesia
21	PT. Rizquna Dewaksara Yogyakarta
22	**CV. Herbal Nusantara**
24	CV. Arrahmah
25	PT. Bhumi Rasa

Product 1

LIPI



NANOTECH
Indonesia

Patented by

More than 30 products already in the market

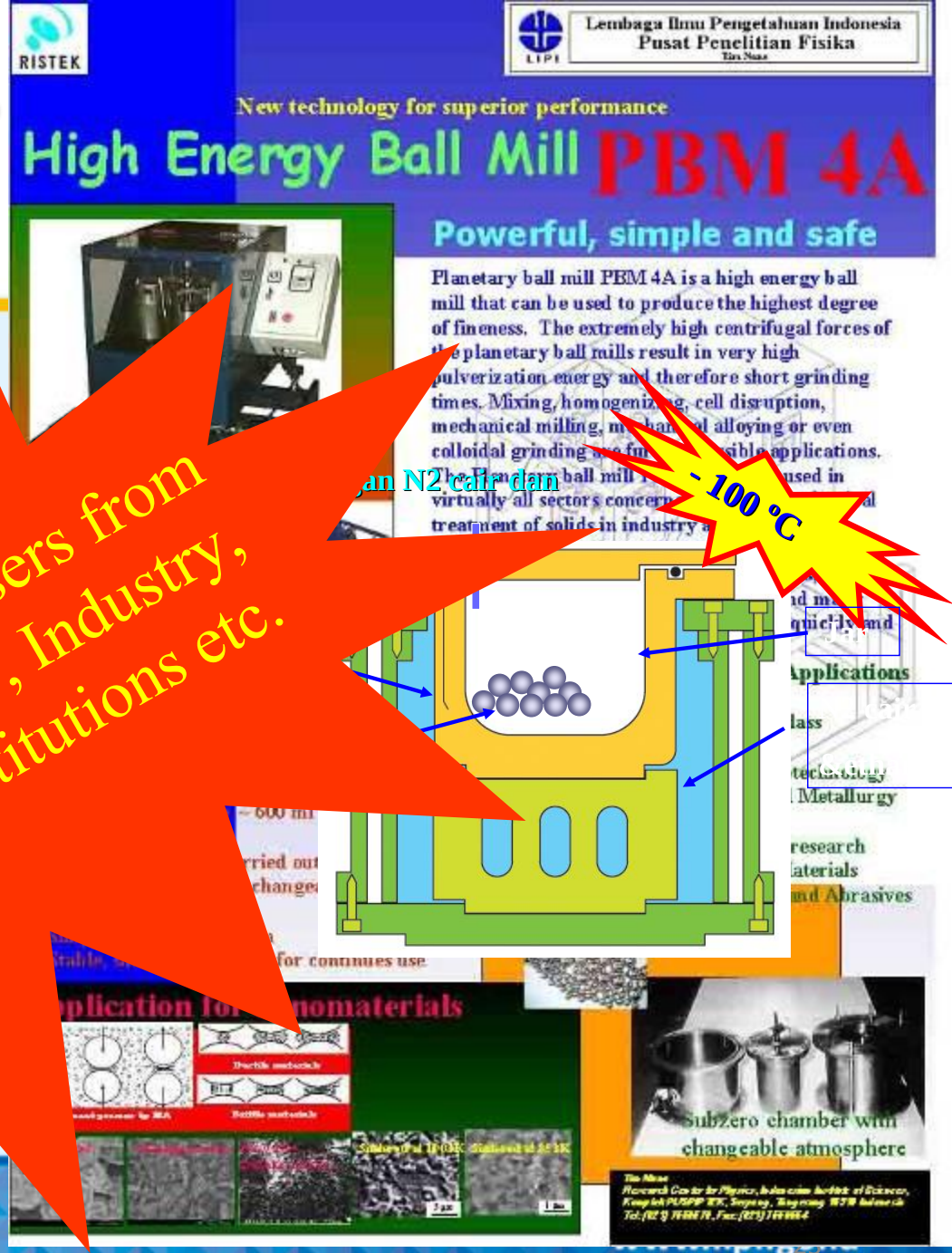
www.lipi.go.id

Our Achievements

High energy milling with Sub Zero atmosphere (up

More than 100 users from university, Industry, R&D Institutions etc.

Nurul et al. develop *pla* *ball mill* 4A with changeable ang nd jar with cha able temperature at ubzero (-100ºC). (paten no. S00200700086)



HIGH ENERGY MILLING E3D (HEM-E3D)

Nanoparticle Milling Machine

RICE NANOPARTICLE

- Special order from Gizi Indonesia, Ltd
- As active ingredient, UV protection, and opacity agent

LIPI

Rice Nanoparticle FOR COSMETICS

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Nano Herbal Commercialization

Development and production of nanoherbal materials

Nano-propolis, nano-spirulina, nano-ginseng, nano-curcumin, nanotongkat ali, etc.

NANO IMPACT

CURCUMA

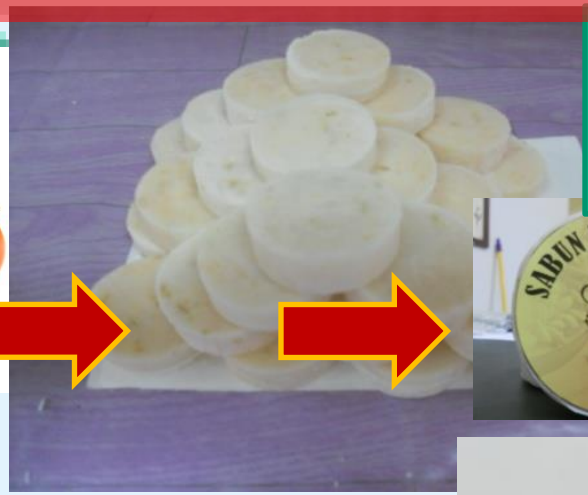
USD 80/ kg

urcuma Nanoparticle

ADDED VALUE of Herbal Materials

INCREASE SIGNIFICANT COMPETITIVENESS FOR AGRICULTURE PRODUCTS

USD 0.5 – 2.5 /kg



USD 25– 80 / kg

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Chitosan Nanoparticle from Shrimp Shell (Fhiseries Waste)

For Cosmetics (anti aging, sun screen etc)

- Wound Healing
- Drug Delivery
- Anti bacteria

USD 160~ 800/ kg

crustace

LIPI has licensed Patents to PT Gizi Indonesia

More than 1,2 milion pieces in 2013

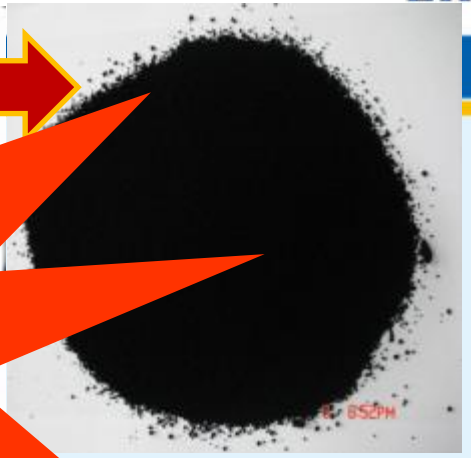
New Market Japan, Malaysia and Saudi Arabia

Coffee Product with Herbal Nanoparticle (*Eurycoma longifolia: Tongkat Ali*) for increasing stamina

Coffee Product with Herbal Nanoparticle ginger and gojiberry for increasing stamina

PT. Herbal Indonesia Pratama

CARBON BLACK PIGMENT FROM NATURAL GRAPHITE FOR WHITE BOARD REFILL INK



More than 40 users from High schools in Tangsel

Black pigment for high temperature paint application

LIPI

Field test : better than commercial one

Preparation for Iron Oxide Pigmen Fractory (130 ton/ month)

FIRST TRIAL IN 6500 DWT SHIP

Red pigm… …lication

…ter than …mmer… one

THANK YOU