

SCIENCE AND TECHNO PARK

Supporting Regional Economic Development,
Synergy Academics, Business and Local Government



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2015

GLOBAL COMPETITIVENESS INDEX

INDONESIA 2014



Global Competitiveness Index

	Rank (out of 144)	Score (1–7)
GCI 2014–2015	34	4.6
GCI 2013–2014 (out of 148).....	38	4.5
GCI 2012–2013 (out of 144).....	50	4.4
GCI 2011–2012 (out of 142).....	46	4.4

12th pillar: Innovation

	Value	Rank / 144
12.01 Capacity for innovation.....	4.8	22
12.02 Quality of scientific research institutions	4.3	41
12.03 Company spending on R&D.....	4.0	24
12.04 University-industry collaboration in R&D	4.5	30
12.05 Gov't procurement of advanced tech products	4.2	13
12.06 Availability of scientists and engineers	4.6	31
12.07 PCT patents, applications/million pop.*	0.1	106

University – industry research collaboration is one of the factors affecting the competitiveness of a nation

UNIVERSITY – INDUSTRY COLLABORATION IN INDONESIA

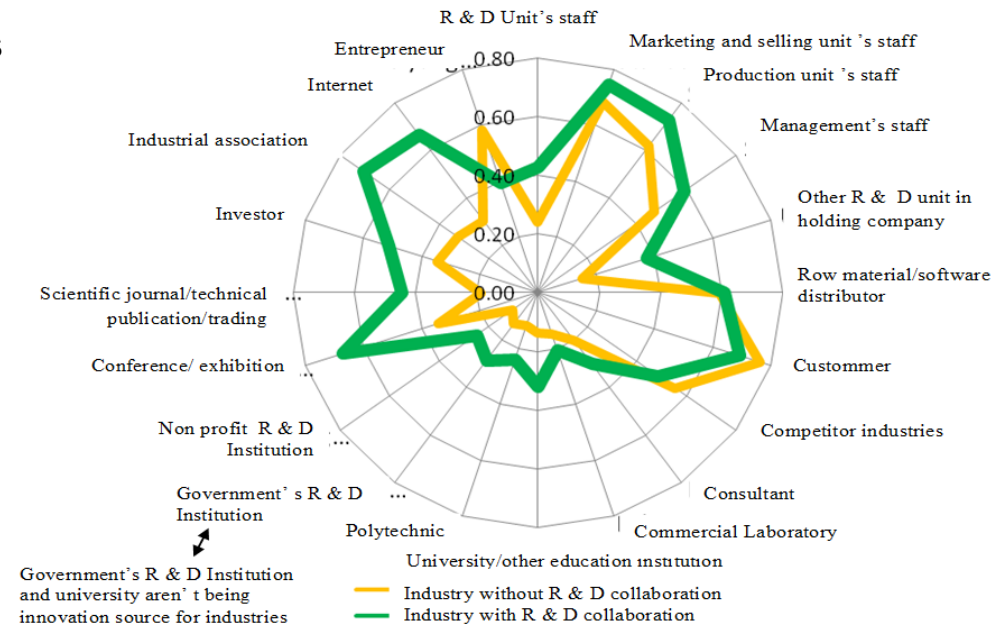
12% industries have R&D cooperation with R&D institution and universities

88% industries conduct their R&D activities themselves



The survey shows that government R&D institutions and universities are not a primary and the most influential source of innovation's information to the industry

Source: Innovation of Manufacture Industries Survey, 2012 Pappiptek-LIPI



Innovation Information Source 2009

NATIONAL RESEARCH EXPENDITURES

	Tahun 2013
GERD	Rp. 8,09 triliun
PDB	Rp. 9.083,97 triliun
GERD/PDB	0,09%

GERD= GROSS EXPENDITURE ON R & D

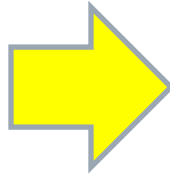
UNESCO = 1% GDP,
Developing Country



Government share= 74% , Private = 26 %

GOVERNMENT PROGRAM'S FOR DEVELOPING AND CONSTRUCTING STP (S) THROUGH NATIONAL/REGIONAL INNOVATION SYSTEM AND R & D INVESTMENT

GOVERNMENT PRIORITY AGENDA(NAWA CITA)



- To Develop and equipped with the latest technology a number of science and techno parks, polytechnic and vocational school in the regency/city ,
- To strengthening technology application through developing policies of a national innovation system
- To prioritizing funding for supporting research, science and technology

TARGETS



Developing 100 Techno Parks in the area of Regency and City and Science Park in every Province

NATIONAL POLICY DIRECTION OF STP

National Medium-term Development Plan /RPJMN 2015-2019

- I. Development of **National Science Techno Park, N-STP**, directed and serves as :
 - 1) Centre for science development and advance technologies
 - 2) Centre for advanced technologies in the field of new entrepreneurial development
 - 3) Center of advanced technology services to business and industry
- II. Development of **Science Park** in every province directed and serves as:
 - 1) Providers of knowledge of the latest technology to the community;
 - 2) Provider of technology solutions that are not resolved in the techno park;
 - 3) Advanced technology application development center for the local economy.
- III. Development of **Techno Park** in regency/city, directed and serves as :
 - 1) Centre for application of technology to stimulate the economy in regency/city;
 - 2) Training facilities, apprenticeship, technology dissemination center, and business advocacy center to the public at large;

STRATEGY DEVELOPMENT

► Development of **N-STP** :

1. Revitalization of research area towards advanced and modern N – STP
2. Developing new N-STP in excellent sectors
3. Developing a N-STP based on Higher Educations (**HE**)

► Development of **Science parks – Province** :

1. Ristek-Dikti develop a Science Park which affiliate to university
2. Other ministries or R & D Institute develop Science Park which appropriate with its competency

► Development of Techno Parks– **Regency/City**: through ministry and R&D Institute competencies and affiliate with nearest university/polytechnics

DOWN STREAMING RESEARCH & DEVELOPMENT RESULTS

MODIFICATION OF SCIENCE TECHNO PARK CONCEPT FOR INDONESIA CONDITION

- National Science Techno Park
 - Science Park (SP) in province level
 - Techno Park (TP) in regency and city level
-
- ✓ Technology application to the community level through the dissemination of technology, training and apprenticeship by universities / R & D institute
 - ✓ Community introduced by the application of technology to aid the production process to improve competitiveness
 - ✓ The role of universities / R & D institute for assistance, training and technical consulting
 - ✓ The role and support of the local government in terms of providing of infrastructure and facilities
 - ✓ Triple Helix concept introduced

RISTEK – DIKTI PROGRAM 2015-2019

1.;
2. Formulation and establishment of R & D institute quality policies, human resources, r & d infrastructure, strengthening innovation and research, technological development, mastery of technology transfer, capacity building of technology audit, protection of intellectual property rights, acceleration and mastery, utilization, and promotion of research and technology ; (Presidential Decree number 13/2015)
3.

Policy	Strategy	Indicators
Improving the Quality of Higher Education and Research Institutions	Developing Science Technology Park (STP) and S&T Centre of Excellence	Number of STP
		Number S&T Centre of Excellence



Minister for Research, Technology and Higher Education, Presented to the National Conference on Research, Technology and Higher Education, February 26, 2015

THE OFFICIAL DEFINITION ADOPTED BY THE INTERNATIONAL ASSOCIATION OF SCIENCE PARKS ([IASP](#)) (FEBRUARY 2002)

A science park is an organization managed by specialized professionals, whose main aim is to increase the wealth of its community by promoting the culture of innovation and the competitiveness of its associated businesses and knowledge-based institutions.



To enable these goals to be met, a science park stimulates and manages the flow of knowledge and technology amongst universities, R&D institutions, companies and markets; it facilitates the creation and growth of innovation-based companies through incubation and spin-off processes; and provides other value-added services together with high quality space and facilities.



HIGHER EDUCATION IN INDONESIA

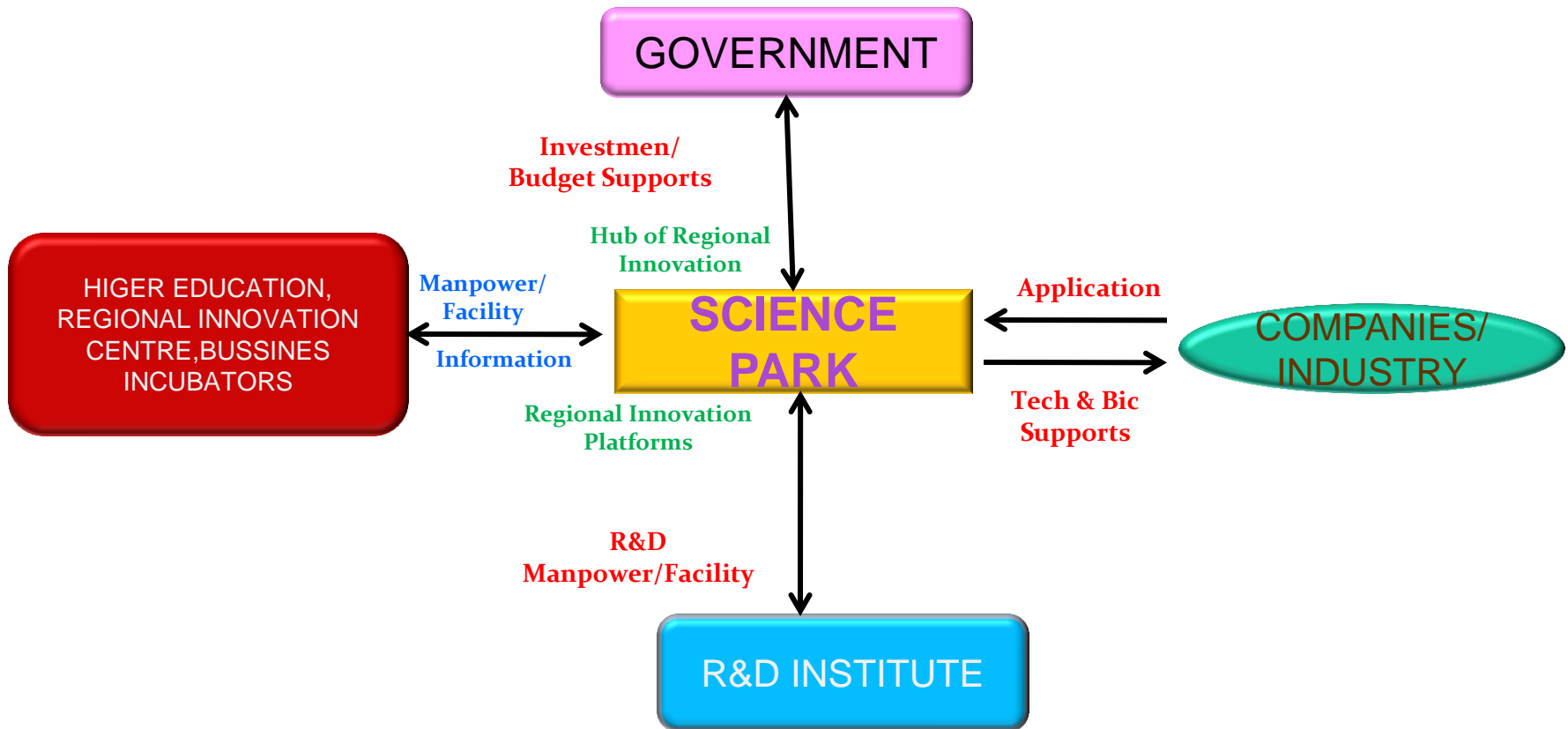
University	→	519
Institute	→	59
College	→	1.384
Diploma	→	1.030
Polytechnique	→	193

**3.185
Higher
Education**

Large Industry → 4.968 unit



TRIPLE HELIX MODEL AND S&T PARK



GOVERNMENT ROLE IN CONSTRUCTING AND DEVELOPING STP

RISTEK-DIKTI

- ✓ Management and technical support: concept, planning, capacity building and related programs
- ✓ Develop networking among world STP, through Indonesia STP Association (ASTPI), *World Technology Association (WTA)*, *Asia Science Park Association (ASPA)*, UNESCO, etc.
- ✓ Technical research and development support of universities and R & D Institutes under the coordination of Ristek-Dikti
- ✓ R & D incentives

Ministry: Finance, Industry, Cooperation & SME, National Education, Labor, ETC

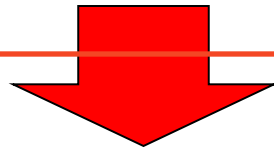
- ✓ Facilities support (productions tools, prototyping, etc)
- ✓ Fiscal and financial support
- ✓ Program support
- ✓ Market support for SME (STP tenant) products

Local Government

- ✓ Licensing and institutional facilities
- ✓ **Provision of land and infrastructure**
- ✓ Concept, master plan and institutional development
- ✓ Program support
- ✓ Strengthening regional networking among universities, regulation board financial institution etc.

STP ROLE

- The ' hub ' of the National/Regional Innovation System
- Developing a network among various institutions / actors of R & D
- Prototype production site to pilot scale innovation-based industries
- Provide intermediation services, incubation and marketing, technical training
- Provide technical and business management services



1. Facilitating the development of technology-based SMEs (incubation and spin-off process)
2. Promoting the entry of large industry-based technology (space, R&D facilities provision)

STP DEVELOPING REQUIREMENTS

MAIN CONDITIONS



HE / R&D INSTITUTE SUPPORT
IN RESEARCH CAPACITY



GOVERNMENT
SUPPORT (REGULATIONS,
INFRASTRUCTURES, HUMAN
RESOURCES)



INDUSTRY/BUSINESS SUPPORT

ADDITIONAL CONDITIONS



Already prepared land
and **basic
infrastructure**



Existing Business
Incubators (embryo of
STP)

FOCUS: ICT, MEDICINE, BIOTECH,
AGRO TECH ETC.

LEADING DOMESTIC INDUSTRY

Food Industry

1. Fish Processing Industry
2. Milk Processing Industry
3. Vegetable Oil Processing Industry
4. Industrial Processing of fruits and vegetables
5. Beverage industry
6. Flour industry
7. Based sugar cane industry
8. Industrial Materials Toner, include Cocoa Processing Industry and Coffee Processing

Textiles Industries

1. Yarns and fabrics industry
2. Textile/garment industry
3. Footwear industry
4. Plastics and rubber industry for domestic use
5. Wood processing industry, rattan processing industry, furniture industry, paper industry

Transportation Industry

1. Two-wheeled motor vehicle industry
2. Four-wheeled vehicles industry
3. Fishing boats
4. Train
5. Aircraft components, and
6. Rocket launcher

ICT and Electronics Industry

1. Terrestrial transmission telecommunications equipment industry,
2. Content telematics,
3. Electronic components,
4. Solar cell components

Power Plant Industry

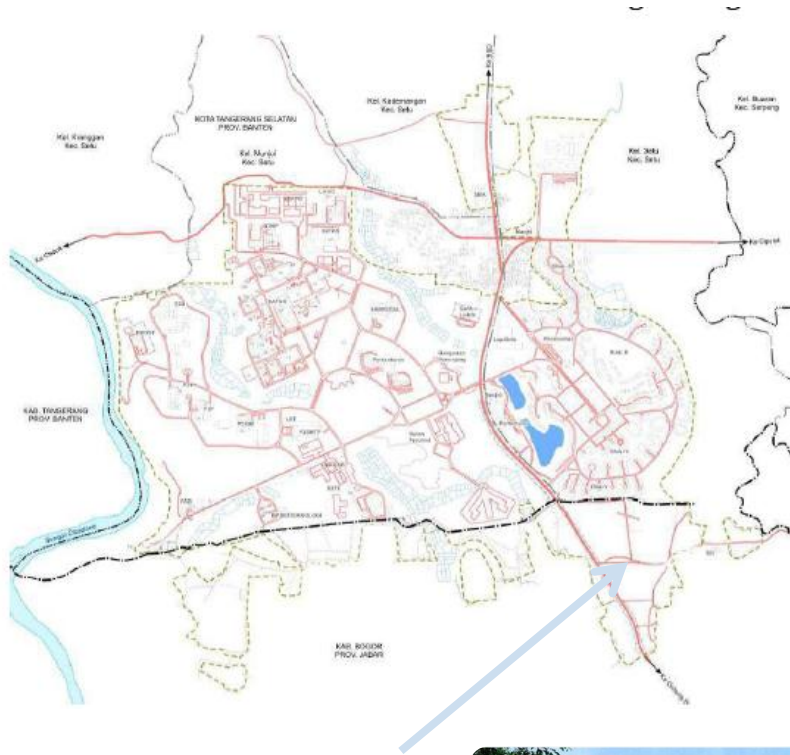
1. Solar cells power generation
2. Biodiesel power generation
3. Nuclear Power generation
4. Steam power generation /Coal
5. Gas power generation

Pharmaceutical, Health and Cosmetics Industry

1. Pharmaceutical, herb and cosmetic
2. Testing Equipment and Medical Equipment

EXISTING STP (1)

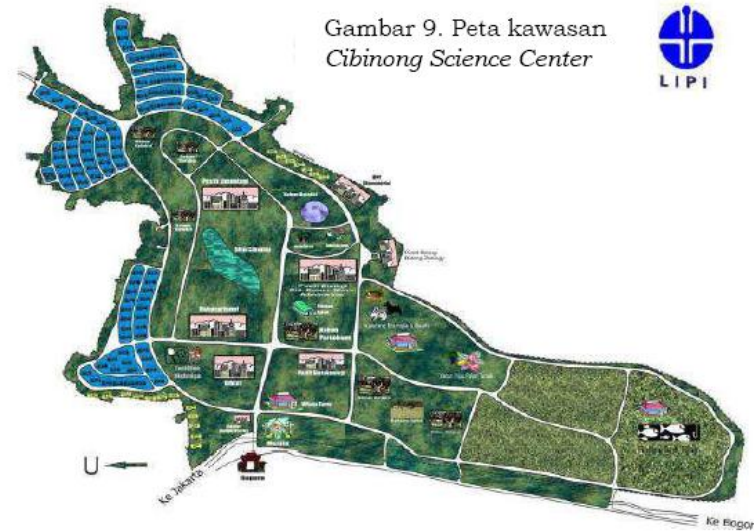
PUSPIPTEK



TBI-Center Area(27 Ha)



CIBINONG SCIENCE CENTER



Gambar 9. Peta kawasan
Cibinong Science Center



Incubator- Pusat
Inovasi LIPI

EXISTING STP (2)

SOLO TECHNOPARK



Diklat
Mesin/Mekanik



Diklat Incubator Bisnis



Praktek Kerja Industri
SMK



Jasa Produksi



Diklat Las/Las
dalam air



Diklat Basic Aircraft
Structure

BANDUNG TECHNOPARK





MOBILE TICKETING
enhance your business

CONTACT US: 022-88884200

ABOUT PRODUCT

- 1. Easy to use
- 2. Easy to install
- 3. Easy to use
- 4. Easy to use
- 5. Easy to use

FEATURES PRODUCT

- 1. Easy to use
- 2. Easy to use
- 3. Easy to use
- 4. Easy to use
- 5. Easy to use



uKit
JAV Microcontroller Training Kit





ACADEMIC E-JOURNAL
Jurnal Ilmiah dan Kejuruan

E-Journal



SPS
Smart Parking System



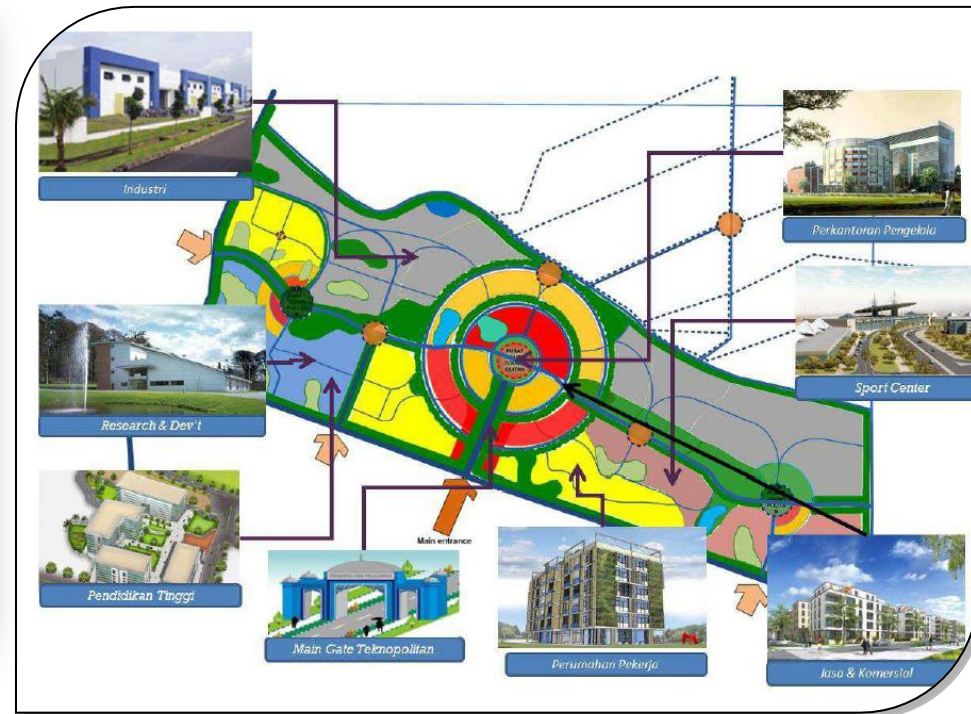
EXISTING STP (3)

CIKARANG TECHNOPARK



TRAINING, MACHINERY PART
PRODUCTION

PELALAWAN TEKNOPOLITAN



3.754 Ha for 13 zone

EXISTING STP (3)

BATAM TECHNO PARK (KEPULAUAN RIAU PROVINCE)



BATAM TECHNO PARK PROGRAMS

Technology
business
incubator

Business
consultation and
mediation

Teaching factory
manufacturing
electronic

Industrial
clustering
development

Training and
certification

Technology
research and
development

**Focus on ICT &
Data Centre**



FUTURE DEVELOPMENT OF TECHNO PARKS IN REGENCY AND CITY 2015 (RPJMN 2015-2019)

No.	Ministry/R&D I	REGENCY / CITY
1.	Ristek–Dikti	4 Locations: (1) Agro Techno Park – Indralaya , Kab. Ogan Ilir, Sumsel; (2) Kab Kaur – Bengkulu; (3) Solo Techno Park – Kota Solo – Jateng ; (4) Sragen Techno Park – Kab Sragen – Jateng.
2.	LIPI (The Indonesia Institute of Sciences)	7 Locations: Kab. Samosir – Sumatera Utara, Kab. Maluku Tenggara/Tual – Maluku, Kab. Lombok Barat – NTB, Kota Ternate – Maluku Utara, Kab. Enrekang – Sulawesi Selatan, Kab. Tasikmalaya – Jawa Barat, and Desa Banyumulek, Kab Lombok Barat – NTB.
3.	BATAN (The National Nuclear Research Agency)	3 Locations: Kab. Musi Rawas – Sumatera Selatan, Kab. Klaten – Jawa Tengah, and Kab. Polowali Mandar – Sulawesi Barat.
4.	BPPT (The Agency of Assessment and Application of Technology)	7 Locations: Kab. Pelalawan – Riau, Kota Pekalongan – Jawa Tengah, Kab. Bantaeng – Sulawesi Selatan, Kab. Lampung – Lampung, Kota Cimahi – Jawa Barat, Kab. Grobogan – Jawa Tengah, and Kab. Gunung Kidul – DI Yogyakarta.
5.	Ministry of Industry	7 Locations: Kab. Bandung – Jawa Barat, Kota Denpasar – Bali, Kota Semarang – Jawa Tengah, Kota Batam – Kepulauan Riau, and Kota Makassar – Sulawesi Selatan, Kab. Sumbawa NTB, Kab. Kota Baru Kalsel

FUTURE DEVELOPMENT OF TECHNO PARKS IN REGENCY AND CITY 2015 (RPJMN 2015-2019)

No.	Ministry/ R& D I	REGENCY / CITY
6.	Ministry of Marine Affairs and Fisheries	25 Locations: Kota Depok – Jabar, Kab. Subang – Jabar, Kab. Buleleng – Bali, Kab. Takalar – Sulsel, Kab. Barru – Sulsel, Kab. Pesisir Selatan– Sumbar, Kab. Pamekasan – Jatim, Kota Jakarta Pusat – DKI Jakarta, Kab. Bantul – DIYogyakarta, Kab. Wakatobi – Sultra, Kota Kendari – Sulteng, Kab. Kebumen – Jateng, Kab. Belitung Timur – Babel, Kab. Sleman – DIY, Kab. Bintan – Kepulauan Riau, Kab. Lombok Tengah – NTB, Kab. Pacitan – Jatim, Kota Manado – Sulut, Kab. Tegal – Jateng, Kota Ambon – Maluku, Kab. Banyuwangi – Jatim, Pidie-NAD and Kota Bitung – Sulut.
7.	Ministry of Agriculture	25 Locations : Kab. Deli Serdang – Sumut, Kab. Langkat – Sumut, Kota Payakumbuh/Kab. 50 Kota – Sumbar, Kab. Pasaman Barat – Sumbar, Kota Jambi – Jambi, Kota Bandar Lampung – Lampung, Kab. Cianjur – Jabar, Kab. Bandung – Jabar, Kab. Tegal – Jateng, Kota Batu – Jatim, Kab. Malang – Jatim, Kab. Lumajang – Jatim, Kab. Pacitan – Jatim, Kab. Tanah Laut – Kalsel, Kab. Sumba Timur – NTT/ Kab. Timor Tengah Utara – NTT, Kab. Kupang – NTT, Kab. Poso – Sulteng, Kab. Enrekang – Sulsel, Kab. Kubu Raya-Kalbar and Kab. Parigi Motong – Sulteng.

CLOSING

- STP /TP/ SP is a modification of STP model for Indonesia case
- STP / TP / SP is constructed in terms of government programs 2014-2019
- STP / SP / TP is developed based on the concept NIS/RIS, which there should be a component of A , B , G and C existing together
- STP / SP / TP is supported by an increase in the allocation of R & D expenditure and contributed by government and private sectors
- STP has a focal plane (agrotech, ICT, medicine, advanced materials, etc.) , adapted to the flagship program of regency/city
- TP embryo starts from Universities / Polytechnic / R&D Institute
- Collaboration among ABGC in R & D investment is a very strategic action
- HE can deploy their expertise in assisting the industry
- **STP is the vehicle in developing cooperation between HE and industry**

Thank you

