Science and Technology Park (STP)

Definition (based on Presidential Regulation of The Republic of Indonesia No. 106 of 2017)
“an area that professionally managed to develop and encourage sustainable economic growth through development, application of science and technology, and the growth of technology-based start-ups”

Objective
To develop and utilize science and technology to encourage economic growth.

Function
• a tool for collaborative research and sustainable development between the Central Government, Local Government, Universities, research institutions, and industries;
• facilitator to increase the number of innovation-based companies through incubation and / or spin off;
• provider of quality and value added services
Roadmap Establishment and Development Program STP 2015-2025

Stage 1: 2015-2019
- Establishment of new Technopark (TP) and Science Park (SP)
- Strengthening Technopark, Sciencepark and National-STP existing
- Mapping and evaluation
- Target: 22 TP/SP/N-STP

Stage 2: 2020-2024
- Strengthening TP, SP and N-STP
- 50 TP/SP as ideal science and technology park
- Initiation establishment other STPs

Stage 3: 2025 - ....
- 100 TP/SP as ideal science and technology park
- Contribution of STP to economic development is evident
Until 2018, 45 STPs have been built by various ministries / institutions, such as LIPI, Ministry of Research, Technology and Higher Education, BATAN, BPPT, Ministry of Industry, and Ministry of Agriculture.

### Instansi

<table>
<thead>
<tr>
<th>Instansi</th>
<th>STP</th>
</tr>
</thead>
<tbody>
<tr>
<td>LIPI (Indonesian Institute of Science) (2)</td>
<td>- Cibinong Science and Technology Park (C-STP) - Techno park Banyumulek-NTB</td>
</tr>
<tr>
<td>BATAN (National Nuclear Agency) (4)</td>
<td>- NSTP Nuclear Area Pasar Jumat - Agro Techno Park (ATP) Klaten - ATP Musi Rawas - ATP Polewali Mandar</td>
</tr>
<tr>
<td>BPPT (Agency for The Assessment and Application of Technology) (8)</td>
<td>- Cimahi Techno Park - Techno Park Grobogan - Techno Park Bantaeng</td>
</tr>
<tr>
<td>Ministry of Industry (5)</td>
<td>- Bandung Techno Park - Tohpati Centre-Bali - Digital Science Technopark-Semarang - Batam Technopark - ICT Centre of Excellence-Sulawesi Selatan</td>
</tr>
</tbody>
</table>

**Source:** Bappenas
History and Development of PUSPIPETEK

The opening of the technology business zone and starting the technology business incubation program

Relocation majority of R & D institutions under the BPPT to Puspiptek

Puspiptek revitalization program and the development of STP, started

Puspiptek development in idle condition, in line with national economic and political conditions.

Provide an important role in the growth of strategic state-owned enterprises (BUMNIS)

Puspiptek established by Presidential decree No. 43/1976

1st Okt, 1976

originally intended as an integrated area to put a number of research institutes and national science and technology development.
Main Functions

1. Implement the sustainable R&D
2. Cultivating and developing technology-based startup
3. Attract companies into the park

PUSPIPETEK is one of National-STP (NSTP) operated by MoRTHE
Concept and Direction of PUSPIPTEK Development

Center for mastery and development of national science and technology (center of excellence)

Center for service on development of national strategic products;

Center for Technology-based entrepreneurial development

Center for educational and training for the HR of industries

Center for technology transfer and information of science and technology

Research & Development of S&T: Invention

Technology Business: Innovation
Position of PUSPIPITEK’S N-STP

Central / Regional Government

Institutional & programme

N-STP

Technology Innovation

S&T Infrastructure

Knowledge

Universities

Hi-Tech Industrial Cluster

Puspiptek’s R&D Center

Business / entrepreneurs

Source: masterplan of ISTP, 2013
Focus of Technology:

1. Food and Agriculture
2. Health and Medicine
3. New and renewable energy
4. Information and communication technology
5. Transportation
6. Security defense
7. Advanced materials
8. Maritime
INDUSTRIAL COOPERATION PARTNERS

BATAN (National Nuclear Agency)
# Example for Invention to Innovation in Puspiptek

## Radiopharmaceutical’s test Kits

<table>
<thead>
<tr>
<th>No</th>
<th>Product</th>
<th>Product description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>MIBI Kits (License no. 30/01/2014, No GKL1412428144A1)</td>
<td>MIBI (methoxyisobutylisonitrile) kit is a radiopharmaceutical for the diagnosis of myocardial perfusion (heart muscle) and diagnostic cardiac function.</td>
</tr>
<tr>
<td>2</td>
<td>MDP Kits (License no. 30/01/2014, No GKL 1412428044A1)</td>
<td>MDP (methylene diphosphonate) kit is a Radiopharmaceutical for the diagnosis of bone cancer. used to determine the scattered tumor on the bone, primary bone tumor, and metabolic bone disease.</td>
</tr>
<tr>
<td>3</td>
<td>DTPA Kits. (License No. GKL1412427944A1)</td>
<td>This radiopharmaceuticals are used for imaging the kidney, to assess kidney function and to determine GFR (Glomerular Filtration Rate).</td>
</tr>
<tr>
<td>4</td>
<td>Labelled compounds $^{131}$I-MIBG diagnostics (License no. 05/09/2014, No DKL1412427743A1)</td>
<td>Labelled compounds $^{131}$I-MIBG for neuroblastoma cancer diagnosis</td>
</tr>
<tr>
<td>5</td>
<td>Labelled compounds $^{153}$Sm-EDTMP (License no. 31/10/2016, No GKL 1612428843A1)</td>
<td>Labelled compounds $^{153}$Sm-EDTMP for palliative therapy in patients with cancer that has spread to the bone.</td>
</tr>
</tbody>
</table>

8 product is in the process of clinical trials
INDUSTRIAL COOPERATION PARTNERS

BPPT (Agency for the Assessment and Application of Technology)
INDUSTRIAL COOPERATION PARTNERS
LIPI (Indonesian Institute of Science)
Technology Business Zone
NSTP - PUSPIPITEK
Areas: 27 Ha (2,7 km²) (extended up to 60 Ha)

Allocation:
1. TBIC
2. ILSC
3. Post Incubation cluster
4. Hi-Tech Industrial cluster
TBI-C PUSPIPTEK

- As the Center for growing / developing of technology-based entrepreneurship in the Puspiptek area
- Incubation concept: co-incubation with incubator partners
- 'in-wall' incubatees
- Duration: 1-3 Years
- Selection / competitive by independent reviewers.
- 20 incubatees (tenants) per year
- Program batch-1: 2016.
# Technology Business co-incubation program

<table>
<thead>
<tr>
<th>Service</th>
<th>Activity</th>
<th>Facility</th>
</tr>
</thead>
</table>
| Pre incubation | • Technopreneurship camp and workshop  
• business plan competition                        |                                                                                                |
| Incubation   | • Mentoring  
• Coaching  
• Prototyping, production trial and scaling-up  
• Sales test and market development  
• Training dan workshop  
• Business gathering / investors meet up  
• Product exhibition                        | • Tenant space/room and equipment.  
• Meeting / classroom.  
• Co-Working space.  
• Workshop equipment.                          |
| Post Incubation | Provision of land / facilities for post graduate tenants or companies who want to stay in Puspiptek Park (terms and conditions) | Land and / or buildings for production, the mechanism by rental / leasing, or joint use with build-operation-transfer or build-transfer-operation mechanism. |
TBIC partnership with incubator partners
(CO-INCUBATION)

TBIC-PUSPIPTEK

FACILITIES
- Office Room
- Shared workshop room
- Supporting facilities

INCUBATION ACTIVITIES
- Joint Activities
  - Product Validity
  - Business Development
  - Market Development
- Mentoring ‘Day-to-Day’
Example for Invention to Innovation by Incubation program in Puspiptek

Nano-Chitosan
CRITERIAS OF TENANT

- Individual group (min 2 people)
- Startup company (max 3 years)

- Not yet doing mass production
- Small-scale production related to product development is permitted

- Business products have technological content
- Minimum of Technology Readiness Levels (TRL) 7

Have good business prospects

- Have a strong commitment to carrying out the incubation process
- 'In-wall' at TBIC

Priority for products originating from or related to science and technology in Puspiptek

Prototype
Tenants – 74 Incubatees (2016-2019)
TBI-Center

Post Incubation & Companies resident

- Nanotech Herbal Indonesia
- Mangano
- CTECH Labs
- POWER
- Aerotreking
- ALGAEPARK
- STAR AUTOMATION
- GREEN WELL
- biofarma
- PHYTOPHARCETS
- Valex Polifix Valensi
- Valensi Aluminium Extrusion
- For Lighting Fixtures
- QANTAZ
- PT. NIDA GLOBAL SELUS
Some Products of TBIC Tenants
Some Products of TBIC Tenants
CONCLUSION

KEY ISSUE IN STP POLICY AS VIHICLE FOR ECONOMIC GROWTH
STP POLICIES SHOULD BE INNOVATIVE POLICIES MAINLY HOLISTIC, INTEGRATIF, THEMATIC AND SPACIAL ON SINERGY TRIPLE HELIX MAINLY;

- Capacity building of institutions and science and technology HR nurseries
- Establishment of the National Science and Technology System and Innovation and innovation fund initiatives
- Regional and cultural based technology development
- Optimization of FDI and Global Value chain as a means of technology
- Institutionalization of Triple Helix
- Infrastructure development of R and D supporting structures that are of strategic value
- The creation of an ecosystem that is conducive to growing technopreneur and startup
RECOMENDATION

CHALLENGING STP IN THE ERA IR 4.0;
❑ TECHNOLOGY READINESS LEVEL
❑ CULTURE OF INNOVATION
❑ TECHNOLOGY TRANSFER

❑ Facilitate the exchange of experiences and regional collaboration on STP
❑ Develop technical assistants for developing STP
❑ Develop CoE of incubator IN ESCAP for sharing facilities and transferring knowledge and technology for start up