

# Institutions and infrastructure enabling environment – an application in science and technology park development



United Nations – MoST Joint Capacity Building Workshop on  
Science, Technology and Innovation for SDGs



Ms. Lhing Witthayaweerarak  
Senior Manager, Thai-BISPA

# Agenda



**SP as a  
Driving  
Mechanism**

**01**



**Thailand's Innovation  
Ecosystem**

**02**



**National  
SP Landscape**

**03**



**Thai-BISPA and  
Flagship Initiatives**

**04**



**Key Lessons  
Learned**

**05**



## Science park

A science park is an organisation managed by specialised 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.

*The expressions "technology park", "technopole", "research park" and "science park" encompass a broad concept and are interchangeable within this definition. The acronym STP (science and technology park) is used to refer to all of these expressions.*

IASP

## Area of Innovation

"Areas of innovation" are places designed and curated to attract entrepreneurial-minded people, skilled talent, knowledge-intensive businesses and investments, by developing and combining a set of infrastructural, institutional, scientific, technological, educational and social assets, together with value added services, thus enhancing sustainable economic development and prosperity with and for the community.

*There are many different models of areas of innovation (also known by the acronym AOIs)- spanning from the broader city or region model with innovation activities in different locations within the area, to more place-specific projects like innovation districts, knowledge quarters, science parks, innovation hubs and the like. As a common feature they all have a management team tasked to execute a strategy conducive to growing innovation activity in the area.*

IASP

# Generation(s) of Science Parks



## 01 Research Utilization

- Supply-push
- Mainly driven by Public Sector (Universities or Research Institutes)
- Spin-offs by Professors / Researchers



## 02 Innovation-Oriented

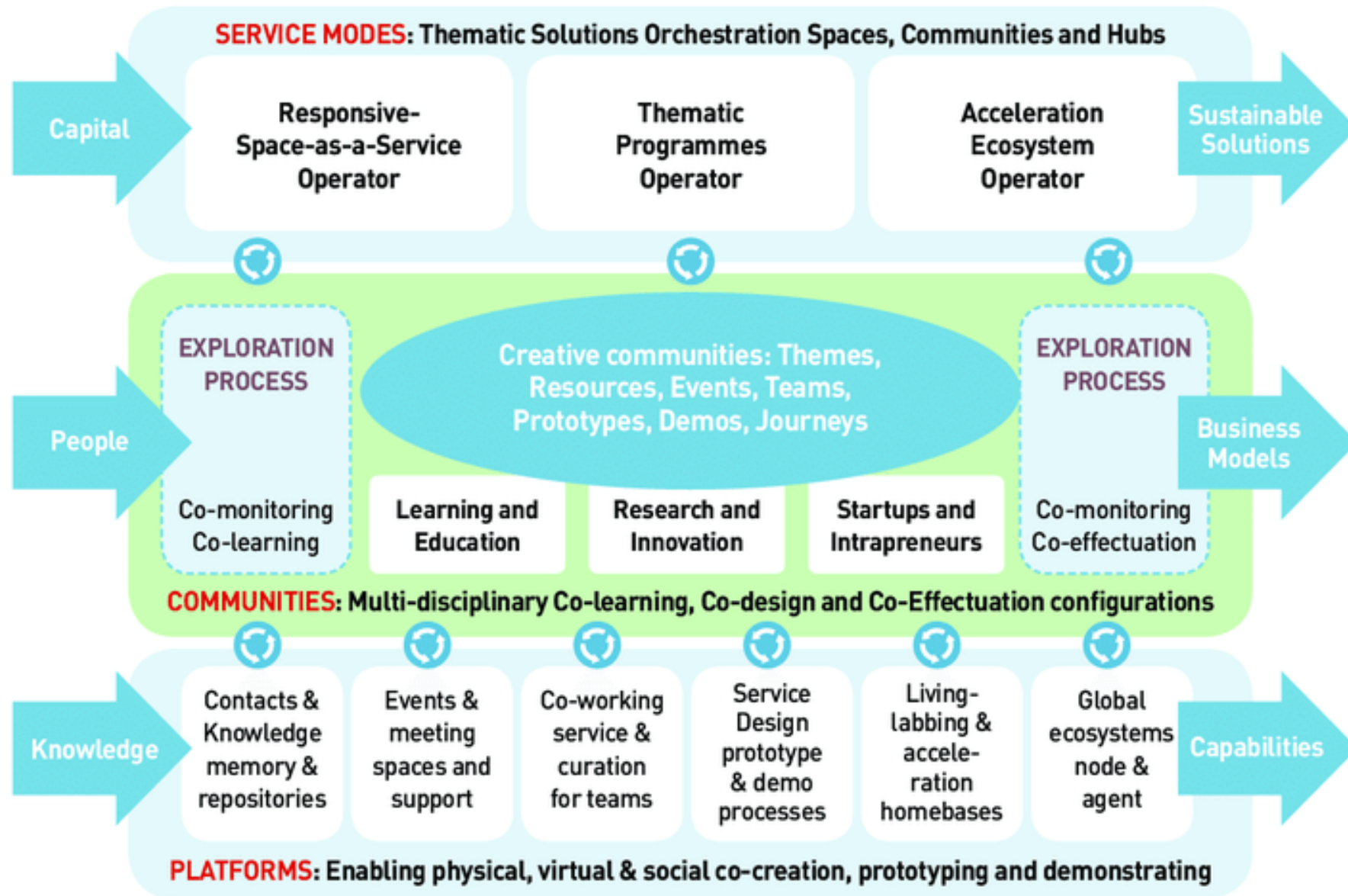
- Demand-pull
- Private-led
- Support the growth of innovative businesses
- Tech-businesses by university students



## 03 Ecosystem Building

- Social and Economic Development
- PPP Model introduced
- Broad portfolio of innovation services
- Encourage entrepreneurial culture
- Mostly located in city centres
- With a professional management
- Scale ranging from certain area to the whole city





Source: Kakko, Ilkka and Mikkela, Kari (June 2016), *Platform Thinking within the Third Generation Science Park Concept: Emerging Cases from Finland and the Netherlands*, World Technopolis Review

# Agenda



SP as a  
Driving  
Mechanism

01



**Thailand's Innovation  
Ecosystem**

02



National  
SP Landscape

03



Thai-BISPA and  
Flagship Initiatives

04



Key Lessons  
Learned

05



# THAILAND 4.0

## Prosperity, Security, Sustainability

Innovative/Value-based Industry  
High Income Country



Thailand 1.0  
Agriculture



Thailand 2.0  
Light Industry



Thailand 3.0  
Heavy Industry

Middle Income Trap  
Inequality & Imbalance

## New Engine of Growth

S-CURVE

Next-Generation Automotive  
Smart Electronics  
Affluent, Medical and Wellness Tourism  
Agriculture and Biotechnology  
Food for the Future

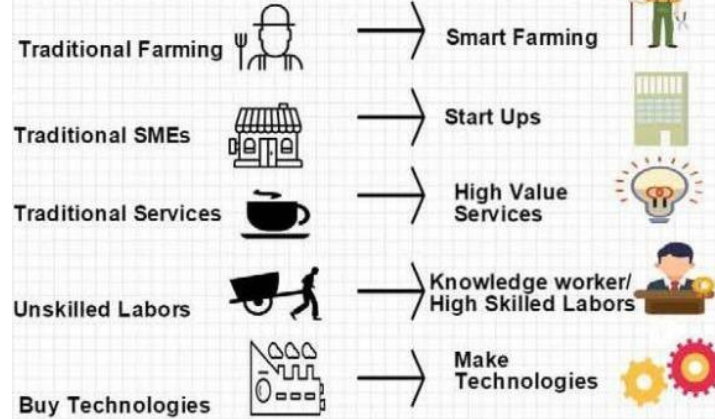


NEW S-CURVE

Robotics  
Aviation and Logistics  
Biofuels and Biochemicals  
Medical Hub  
Digital

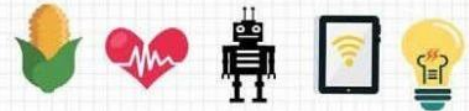


## Transformative Shift



## Clusters for Innovation & Start Ups

Food Agriculture & Bio-Tech  
Health, Wellness & Bio-med  
Smart Devices, Robotics & Mechatronics  
Digital, IoT & Embedded Technology  
Creative, Culture & High Value Services

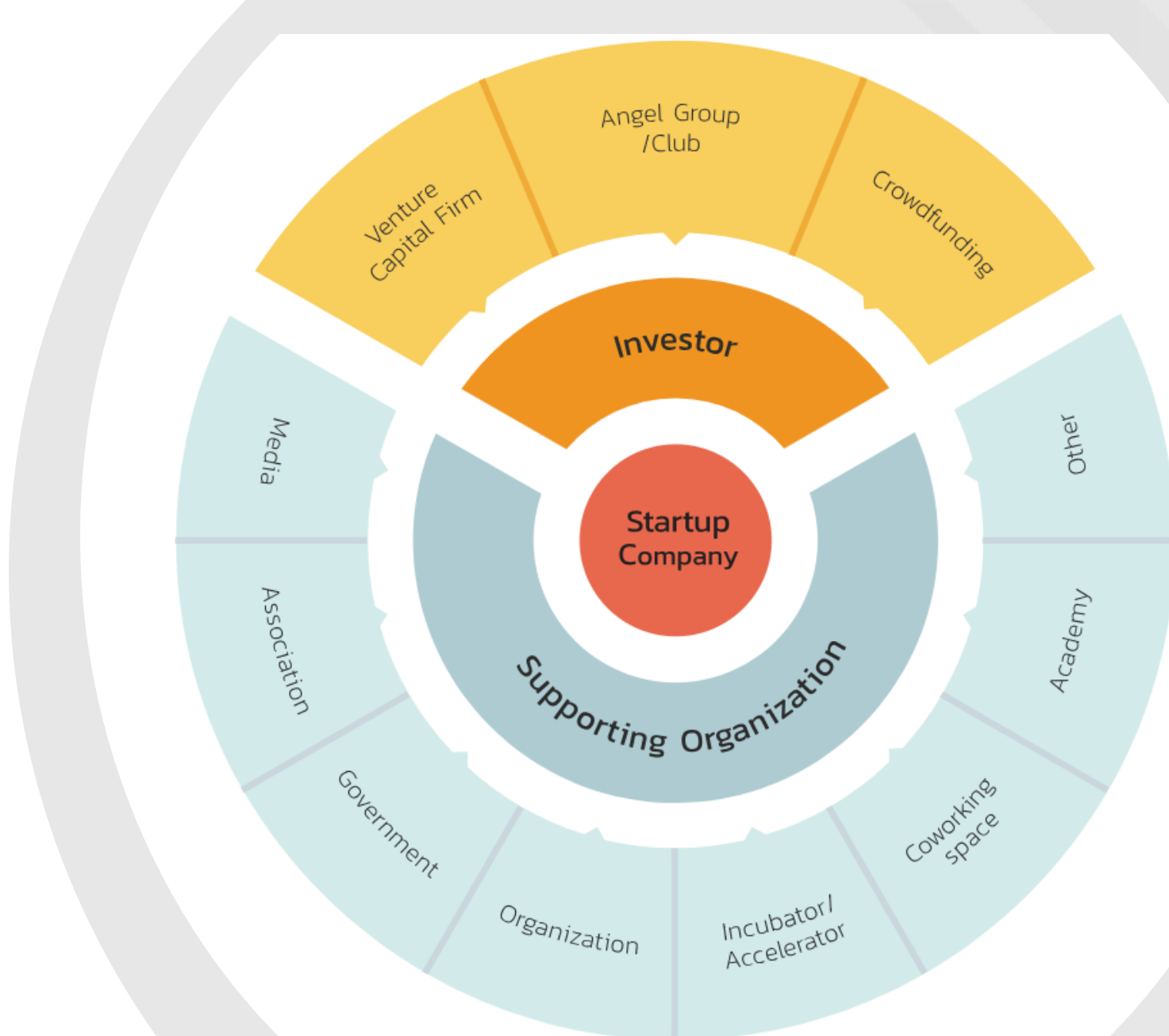


## Priorities for Innovation

Smart City    Low-carbon Society  
Medical Hub    Food Innopolis  
Water Management & Technology

## What to do and How?

1. Active Role of Private Sector
2. Demand-driven Policy
3. Offer Tailored Support Fund
4. Build a Global, Regional & Nationwide R&D Networks
5. Strengthen Vocational Training & Education System
6. Develop Infrastructure
7. Introduce Capability-Based Investment Promotion Scheme & Performance Based Conditional Grants & Incentives



Though the very heart of ecosystem are Entrepreneurs and Investors, surrounding players are playing an important role in providing friendly and high-quality environment, supporting ease and security on doing businesses and deals and improving resources in both senses of quality and quantity.



# Agenda



SP as a  
Driving  
Mechanism

01



Thailand's Innovation  
Ecosystem

02



National  
SP Landscape

03



Thai-BISPA and  
Flagship Initiatives

04



Key Lessons  
Learned

05

# Thailand Science Park: The First Science Park in Thailand



Asian Institute of  
Technology (AIT)

Thammasat University (TU)





- Biotalk
- Air Products Asia
- RPD
- Mitrphol
- NPV
- Thai Herb Medical
- Bioprocessing
- SBBU

**BIOTEC Pilot Plant**

**TUV SUD (Thailand)**

**Convention Center**

- Leasehold Land**
- Betagro Science Center
  - SCG Material
  - PTT Exploration and Production
  - Better Pharma

**MTEC**

**INC 1**

**CO**

# Thailand Science Park

- JEOL
- Golden Water Polymer
- ECOLAB

**Concept Foundation**

- TUV SUD (Thailand)
- Sretthapakdee
- ADTEC
- Health Concepts International
- National University Corporation Tokyo Institute of Technology
- Advance Organic of Integrated Medical
- Bio Consult

- CDIP (Thailand)
- Advance Asian
- Ueno Science Tech Laboratory (Thailand)
- Mould Mate
- Sumitomo Rubber (Thailand)
- The Mapper
- G Softbiz
- Greattech Cybernatics
- Embeded Technology
- DSPComm (Thailand)
- Spin Soft
- Punsarn Asia
- PTT Global Chemical
- Simply Bright System
- InnoFresh
- OU-WAA SOFT
- C-Switechthai (Thailand)
- Biosci (Thailand)
- Feedback 180
- E-Service Services & Solution
- Zoetis (Thailand)
- Bara Scientific
- Full Advantage
- TUV SUD (Thailand)



# Thailand's Regional Science Park (RSPs)



## Northern Science Park (Chiang Mai)

- Chiang Mai University
- Mae Jo University
- Phayao University
- Naresuan University
- Uttaradit Rajabhat University
- Pibulsongkram Rajabhat University



## Southern Science Park (Songkla)

- Prince of Songkla University
- Walailak University
- Thaksin University



## Northeastern Science Park (Khon Kaen)

- Khon Kaen University
- Suranaree University of Technology
- Ubon Ratchathani University
- Mahasarakham University



Year  
2019

Northeastern Science Park (Ubon Ratchathani)  
Northeastern Science Park (Nakhon Ratchasima)

## Pilot Projects under RSPs

- King Mongkut's University of Technology Thonburi
- Burapha University

Source: Presentation of Thailand Science and Technology Indicators 2018, National Science Technology and Innovation Policy Office, Ministry of Science and Technology

# EEC – Mega projects

Eastern Economic Corridor  
of **Innovation**



An innovation district which supports joint R&D projects that bring together the public sector and academia

Eastern Economic Corridor  
of **Digital**



A new economic cluster with a specific focus on digital innovation and investment

Eastern Economic Corridor  
of **Aerotropolis**



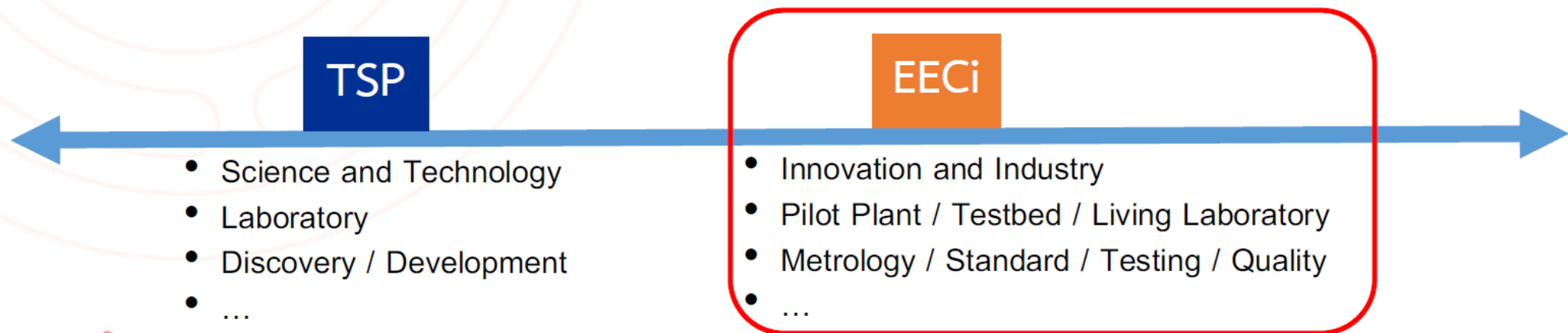
An airport-centered development area incorporating a re-developed U-Tapao airport and other aviation facilities

# What is EECi?

EECi is specialized “Science Park”

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.

EECi Positioning >> Translational Research Platform

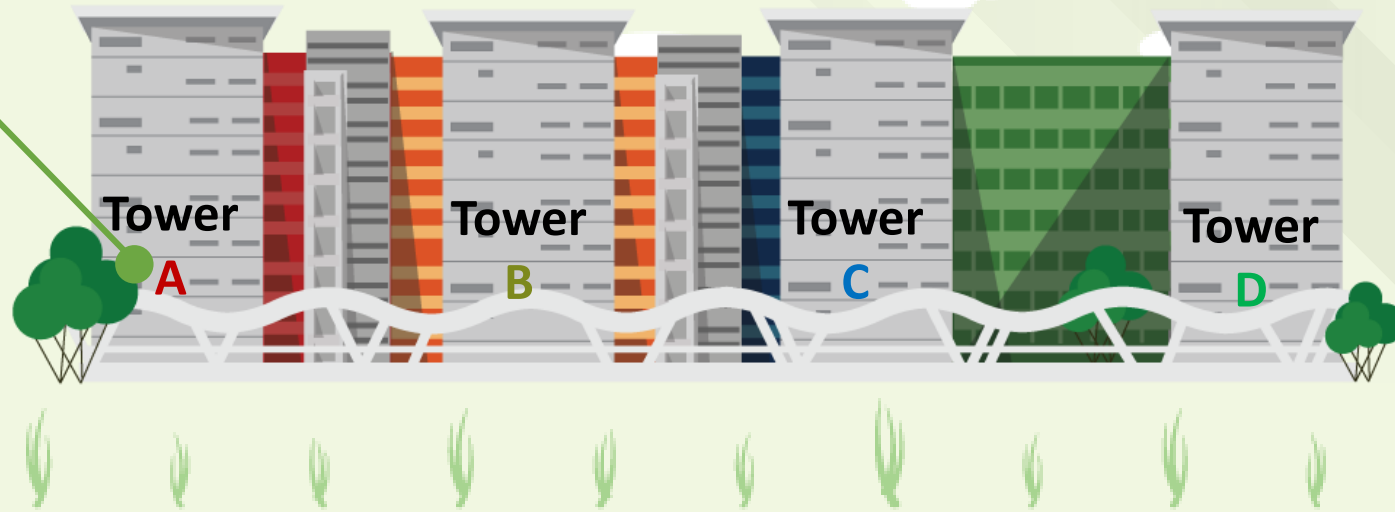




# FOOD INNOPOLIS

## Headquarters

**FdInnopolis**  
at Thailand Science Park  
20,000 m<sup>2</sup>  
available for  
corporate  
R&D Center



## FOOD INNOPOLIS GOALS:



Increase R&D expenditures, attract  
oversea corporate R&D centers



Support and link Thai Startups, SMEs,  
MNCs, with global food value chain



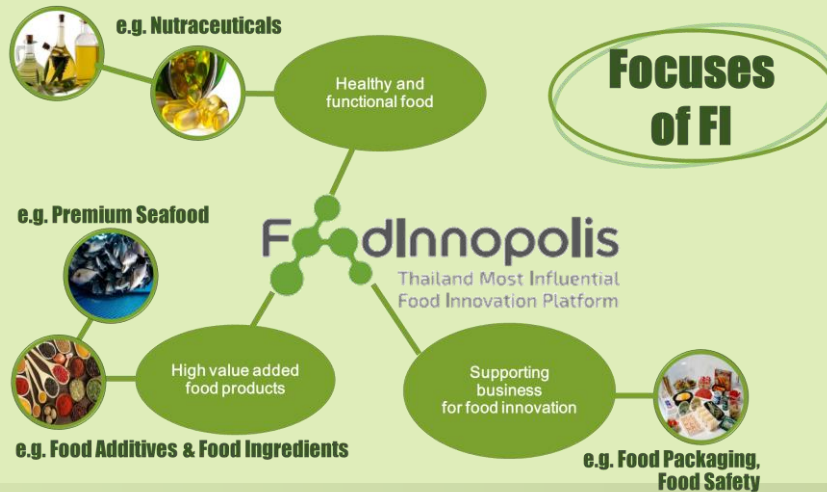
Create high value added products and  
services as a new economic growth engine



Create job opportunities for  
STI staffs and HRD for RDI



Provide world class  
innovation ecosystem



## FOOD INNOPOLIS NETWORK



# INNOVATION DISTRICT



# YOTHI INNOVATION DISTRICT



## ย่านนวัตกรรมโยธี YOTHI INNOVATION DISTRICT

สำนักงานนวัตกรรมแห่งชาติ  
กระทรวงวิทยาศาสตร์และเทคโนโลยี



NATIONAL INNOVATION AGENCY  
MINISTRY OF SCIENCE AND TECHNOLOGY

# Agenda



SP as a  
Driving  
Mechanism

01



Thailand's Innovation  
Ecosystem

02



National  
SP Landscape

03



Thai-BISPA and  
Flagship Initiatives

04



Key Lessons  
Learned

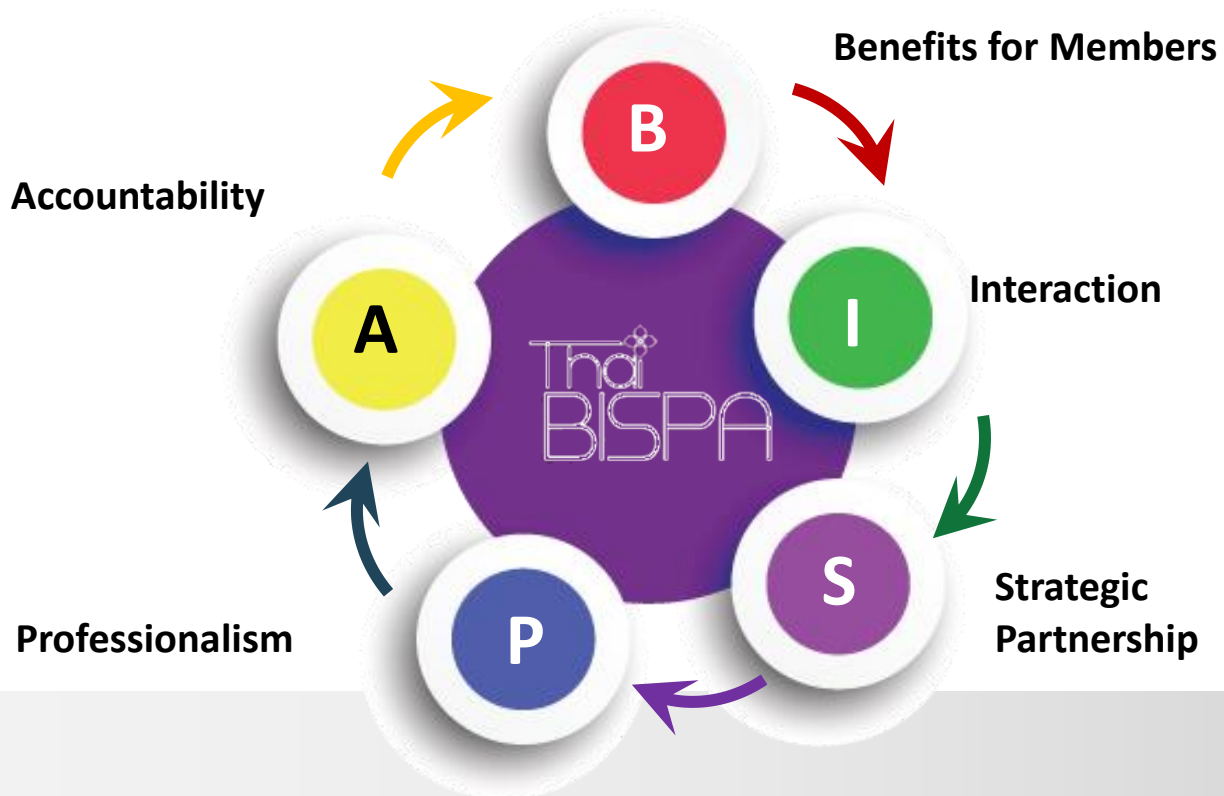
05



# Thai Business Incubators and Science Parks Association

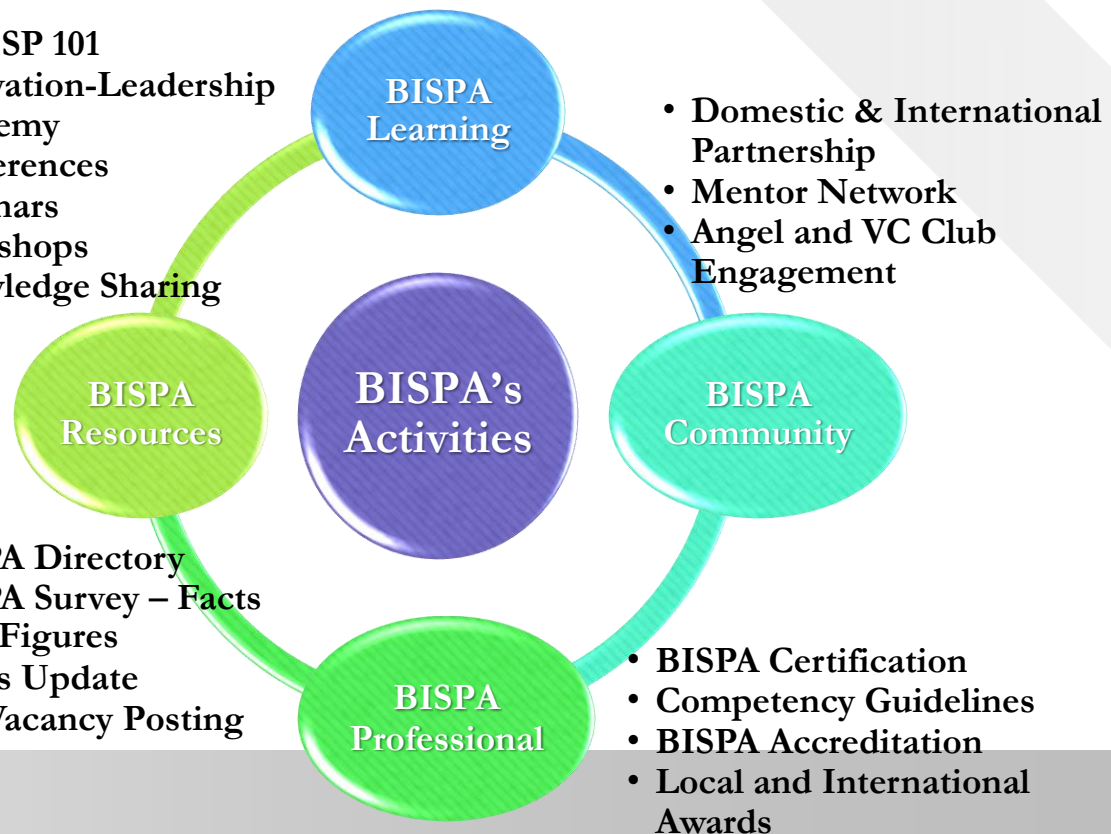
## A Leading Catalyst for Thailand's Innovation Ecosystem

**Mission:** Leveraging Capabilities of Thai Business Incubators and Science Parks Community in the National Innovation Ecosystem and Connecting with Local and International Partners through Strategic Collaboration



- BI & SP 101
- Innovation-Leadership Academy
- Conferences
- Seminars
- Workshops
- Knowledge Sharing

- BISPA Directory
- BISPA Survey – Facts and Figures
- News Update
- Job Vacancy Posting

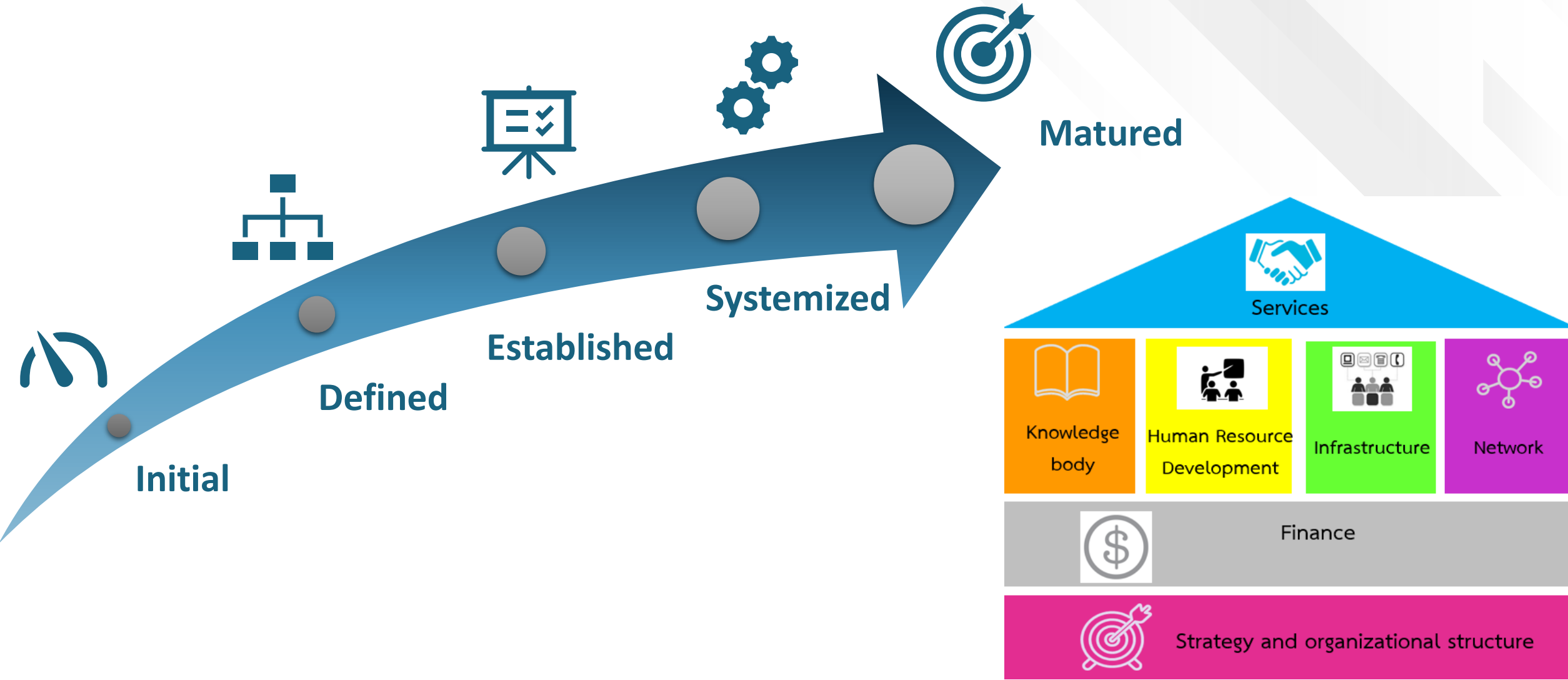




# Thai BISPA

A Leading Catalyst for  
Thailand's Innovation Ecosystem

# Capability Assessment Model for BIs and SPs in Thailand





# Facilitating Tool for Innovation Ecosystem Builders



InteGreat™ is a digital platform to facilitate the service providers to efficiently and systematically support the innovation-driven ventures towards sustainable growth

[www.integreat.in.th](http://www.integreat.in.th)



**Ultimate  
Goal :  
Success of  
business**

**Attitude :  
Disciplined  
Mindset**



**Ecosystem-Engaged**

**Integrated  
Platform  
with Time-  
series**

**Data  
Analytics -  
Open Data**



# Softlanding Program



## Local and International Collaboration



## Sharing Economy

The program is intentionally designed to enhance international-driven attitude among entrepreneurs, BIs and SPs from cross border territories. By leveraging the multicultural character of the area, the aim is to improve start-ups' success performance and their survival chances on the global market while sharing the collaborative resources



# Agenda



SP as a  
Driving  
Mechanism

01



Thailand's Innovation  
Ecosystem

02



National  
SP Landscape

03



Thai-BISPA and  
Flagship Initiatives

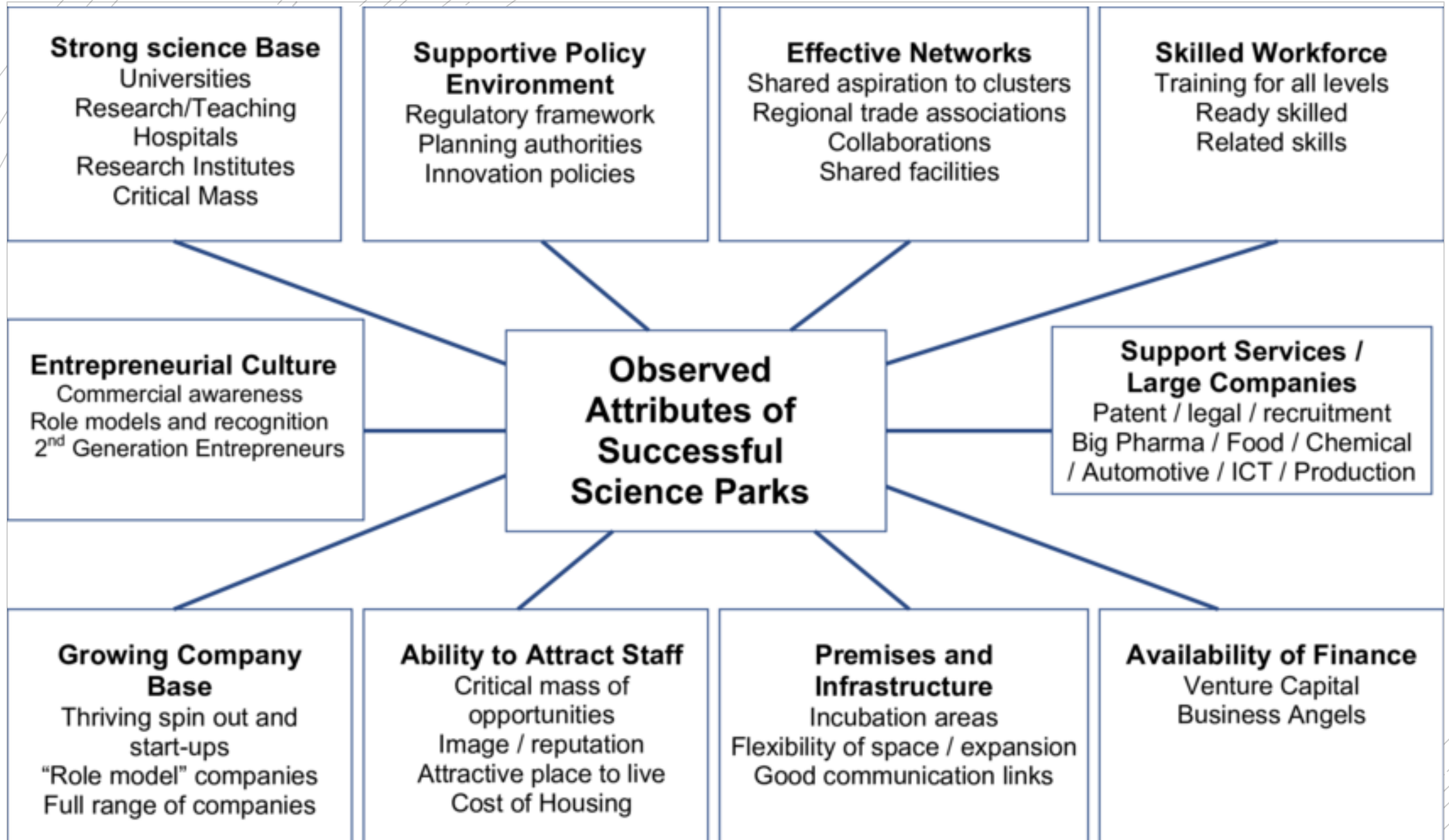
04



Key Lessons  
Learned

05







## **Thai Business Incubators and Science Parks Association (Thai-BISPA)**

131 Thailand Science Park (TSP) Floor 3, INC-1 Building  
Phaholyothin Road, Klong Nueng, Klong-Luang,  
Pathumthani 12120 Thailand

[info@thaibispa.or.th](mailto:info@thaibispa.or.th)

Tel.: +662-564-7200 #5300 , +662-564-7701

Fax.: +662-564-7701

[www.thaibispa.or.th](http://www.thaibispa.or.th), [www.facebook.com/THbispa](https://www.facebook.com/THbispa)

