

Overview: NSTDA at a Glance

International Cooperation Division
National Science and Technology Development Agency

January 17, 2017
Thailand Science Park, Pathum Thani

Outline

- NSTDA and its vision, missions to promote innovation
- NSTDA's Four Missions



NSTDA and its vision, missions to promote innovation

NSTDA at a glance

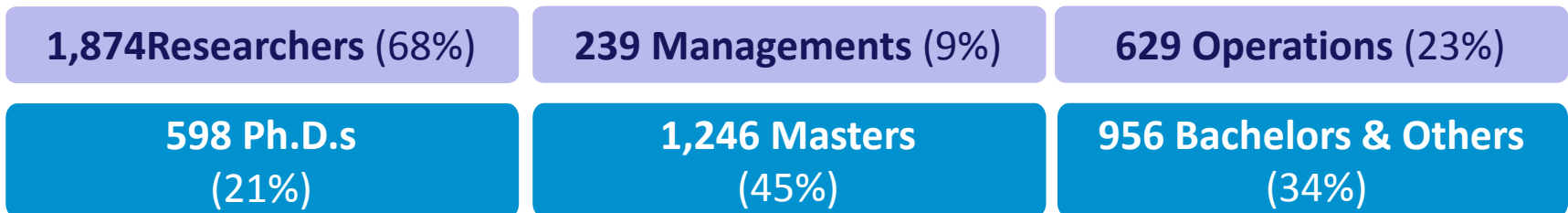
- **Establishment:** December 1991 by Science and Technology Development Act, 1991, as an autonomous government agency
- **Vision:** “NSTDA is a key partner towards a Knowledge-based Society using science and technology.”

- **Missions:** 

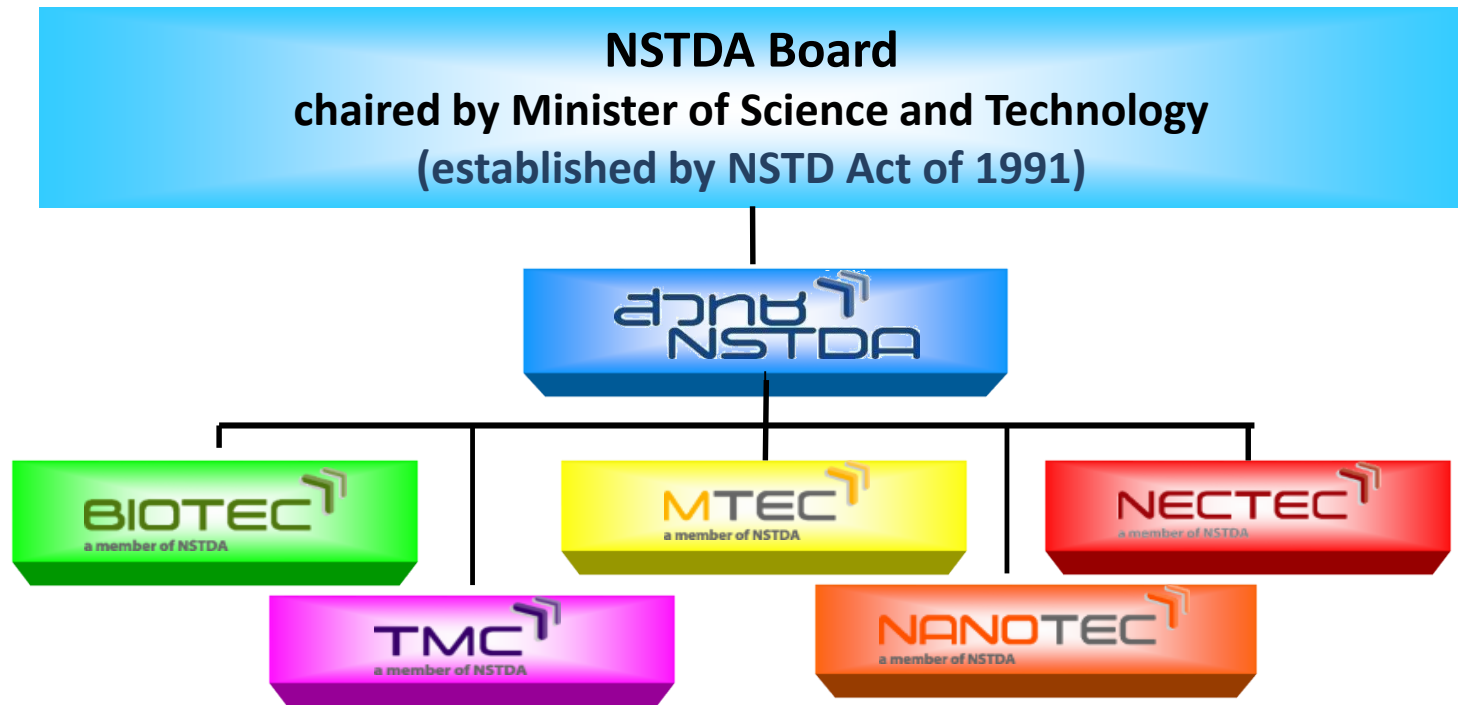
- **Key units:**



- **Human resource:** 2,800 employees (as of 1 April 2017)



NSTDA: an Autonomous Agency



NSTDA : National Science and Technology Development Agency
BIOTEC : National Center for Genetic Engineering and Biotechnology
MTEC : National Metal and Materials Technology Center
NECTEC : National Electronics and Computer Technology Center
NANOTECH : National Nanotechnology Center
TMC : Technology Management Center

Towards a Knowledge-based Society/Economy

Economy

Ability to compete sustainably

Increased investment in STI

- Joint ventures between government and private sector
- NSTDA is first choice in mind for STI solutions
- Make good use of established infrastructure



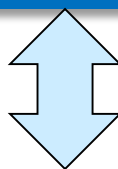
Society

A happy community with good living condition, healthy, safe, steady income and a learning environment

Increased collaboration with farmers

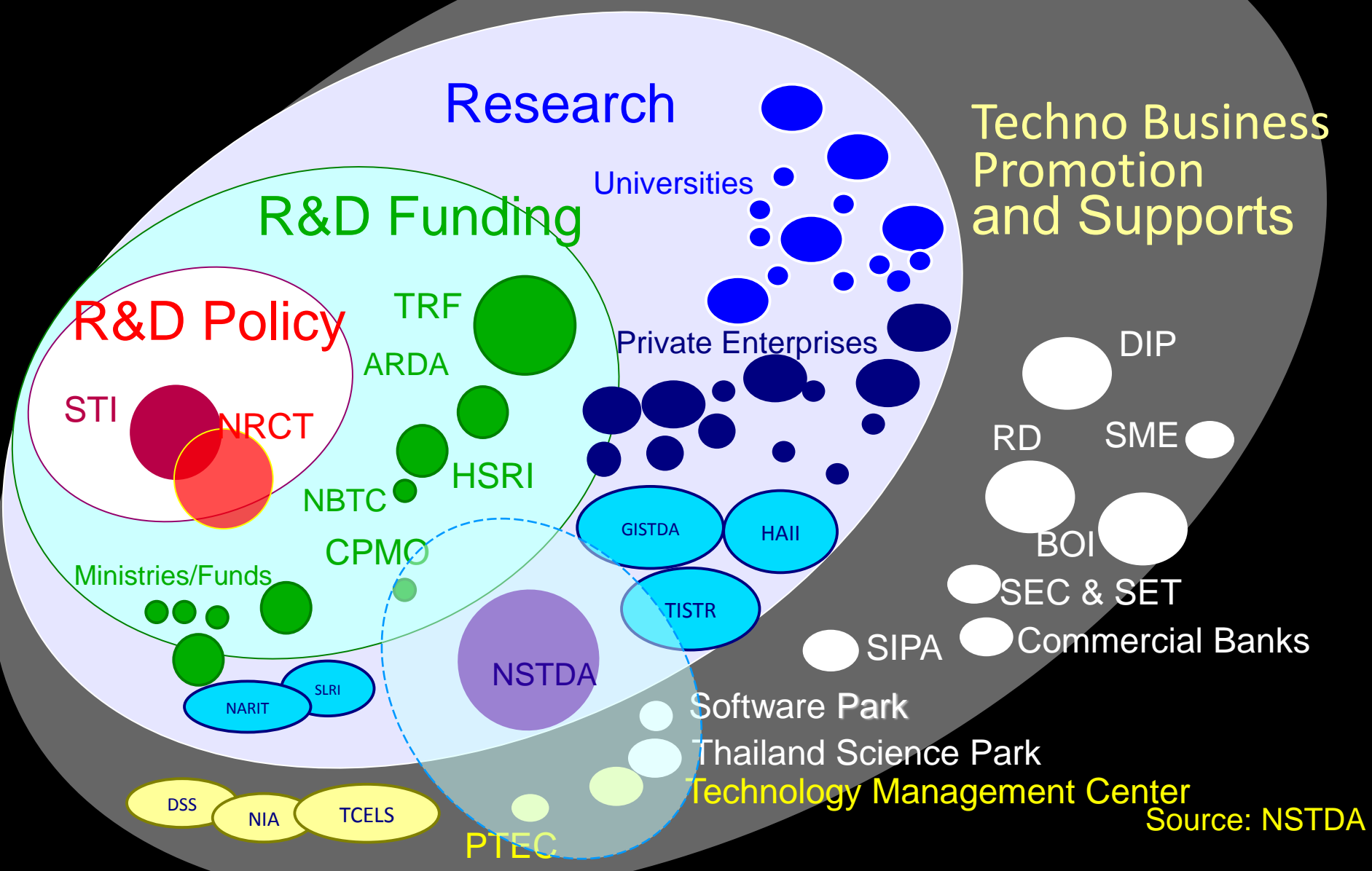
- Increased awareness of STI
- Tangibly increased benefits from STI

Create sustainable and tangible impact in food, agriculture and energy with STI



Excellence in research with efficient management of research outputs
Thailand Science Park: Phase II
Customer focus culture
Effective internal management

NSTDA in Thailand Innovation System



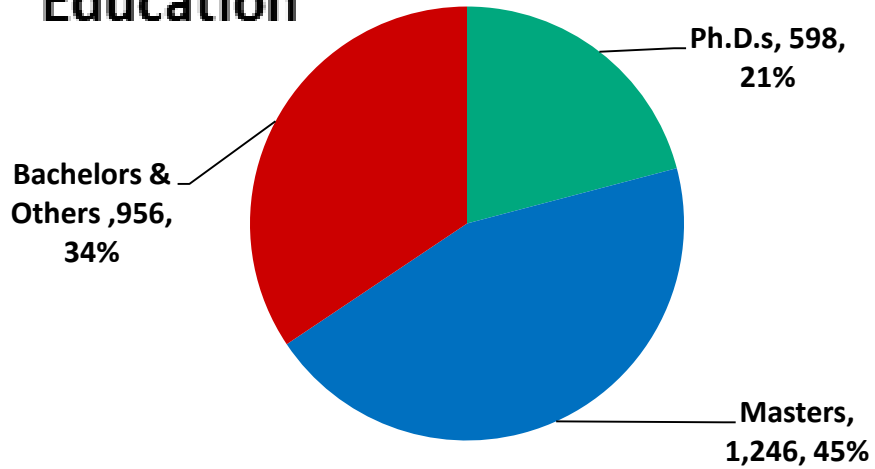
Source: NSTDA

Organizations in Thailand Innovation System

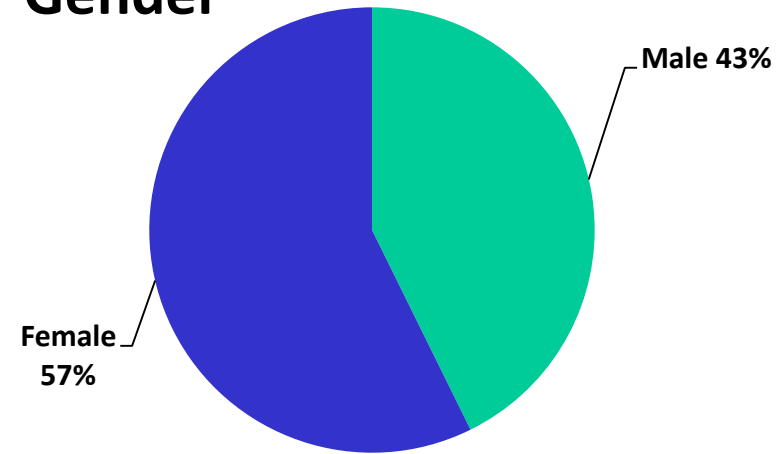
- **R&D Policy**
 - STI: National Science Technology and Innovation Policy Office
 - NRCT: National Research Council of Thailand
- **R&D Funding**
 - TRF: Thailand Research Fund
 - ARDA: Agricultural Research Development Agency (Public Organization), Ministry of Agriculture and Cooperatives
 - HSRI: Health Systems Research Institute, Ministry of Public Health
 - NBTC: National Broadcasting and Telecommunications Commission
- **Research Organizations** (Ministry of Science and Technology)
 - GISTDA: Geo-Informatics and Space Technology Development Agency (Public Organization)
 - HAI: Hydro and Agro Informatics Institute
 - TISTR: Thailand Institute of Scientific and Technological Research
 - NARIT: National Astronomical Research Institute of Thailand
 - SLRI: Synchrotron light research institute
- **Techno Business Promotion and Supports**
 - DIP: Department of Intellectual Property, Ministry of Commerce
 - RD: Revenue Department, Ministry of Finance
 - BOI: Board of Investment
 - SME: Office of Small and Medium Enterprises Promotion, Ministry of Industry
 - SIPA: Software Industry Promotion Agency (Public Organization), Ministry of ICT
 - DSS: Department of Science Service, Ministry of Science and Technology
 - NIA: National Innovation Agency , Ministry of Science and Technology
 - TCELS: Thailand Center of Excellence for Life Sciences (Public Organization)
 - PTEC: Electrical and electronic product testing center (under NSTDA)

Personnel (1 April 2017)

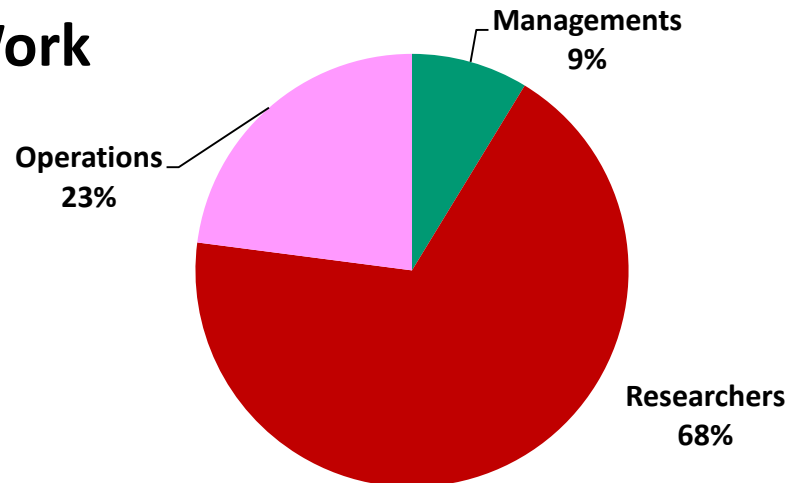
Education



Gender



Area of Work



Mission: Research and Development

NSTDA Research Programs (2011-2016)

Target Industries

Agriculture and Food

Energy and Environment

Health and Medicine

Bioresources and Community

Manufacturing and Service Industries

Research Programs

1. Rice
2. Tapioca
3. Rubber
4. Seed
5. Animal Production and Animal Health
6. Plants for the Future
7. Food Innovation

1. Sustainable Environment
2. Resource and Energy Efficiency
3. Renewable Energy and New Technology Research
4. EGAT joint research program

1. Newly Emerging Disease - Re-emerging Disease
2. Genotype Technology
3. Assistive Devices and Technologies for People with Disabilities and The Elderly
4. Healthcare Practice and Medical Devices

1. Technology for Rural Development
2. Bio-resources

1. Hard Disk Drive Industry
2. Air-conditioning and Refrigerator Industry
3. Automotive and Automotive Parts Industry
4. Rail Technology

Cross-cutting Technologies

Functional Materials
 Digital Engineering (design, engineering, simulation, automation)
 Sensor and Intelligent system
 Service Research & Innovation

Platform Technologies

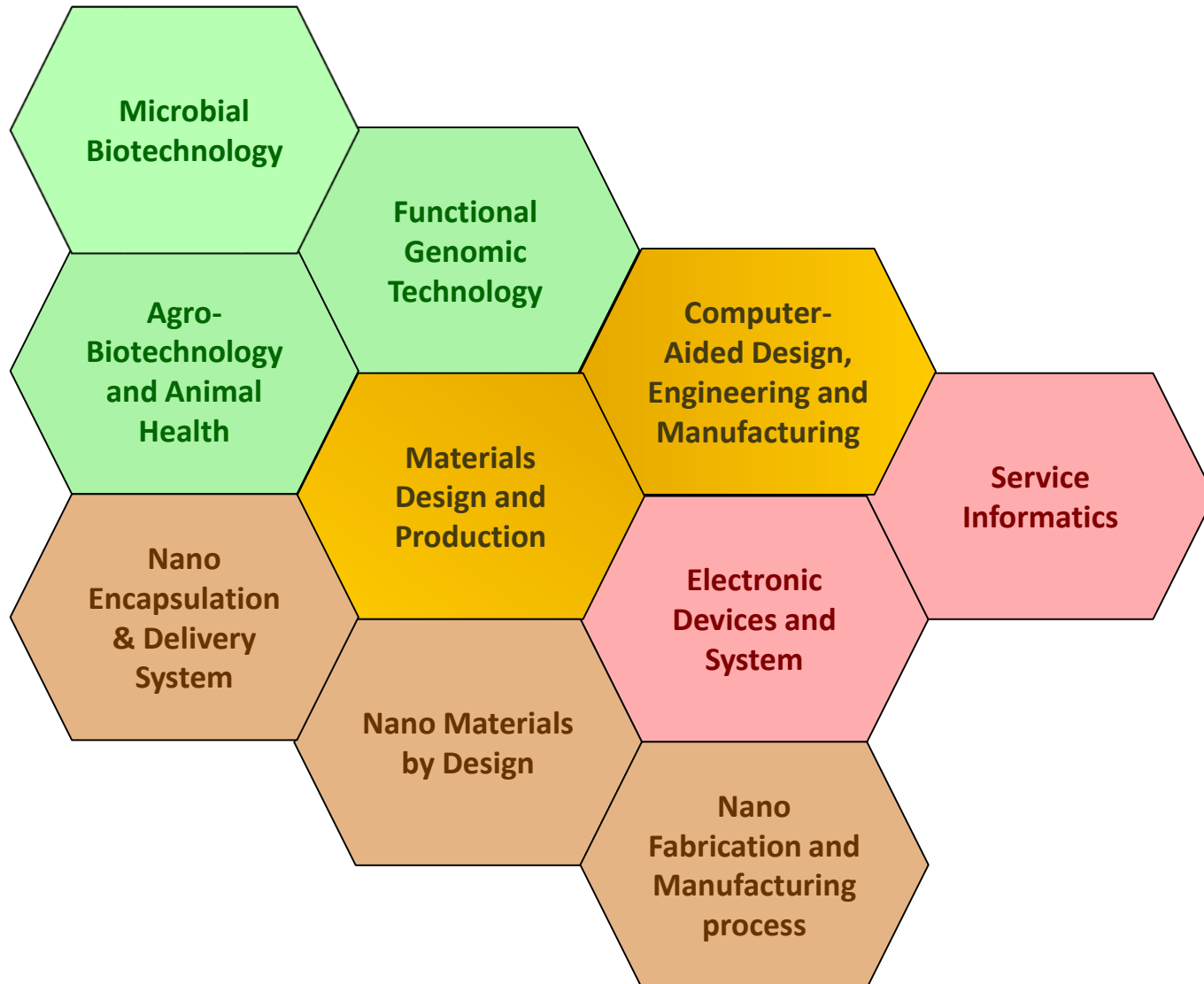
1. Functional Genomics Technology
2. Microbial Biotechnology
3. Agro-biotechnology

1. Computer-Aided Design, Engineering, and Manufacturing
2. Materials Design and Production

1. Electronic Devices And Systems
2. Service Informatics

1. Nano-coating
2. Nano-encapsulation
3. Functional Nanostructure

NSTDA 10 Platform Technologies



Mission: S&T Infrastructure

THAILAND SCIENCE PARK

Infrastructure to support S&T Development



- ❖ Established in 2002 as **Thailand First & Fully Integrated Hub for R&D**
- ❖ Houses Headquarter of National Science and Technology Development Agency (NSTDA) and its 4 National Research Centers
- ❖ **> 70 technology companies**
- ❖ **around 30% are International Firm**
- ❖ **> 500 R&D projects/year**
- ❖ **Joint/Contract project 45-50 %**
- ❖ Objectives:
 - 🌸 Provide High Quality R&D Space for Public and Private Sector.
 - 🌸 Incubate Technology Business Start-ups
 - 🌸 Support Linkage between Private Companies, NSTDA, and Universities.

Member of

International Association of Science Parks



President
Mauricio Guedes
Parque Tecnológico do Rio de Janeiro
Brazil



Vice-President
Rick Weddle
The Research Triangle Park
USA



- Nearly 400 from 70 countries
- More than 200,000 Companies located in IASP member Parks



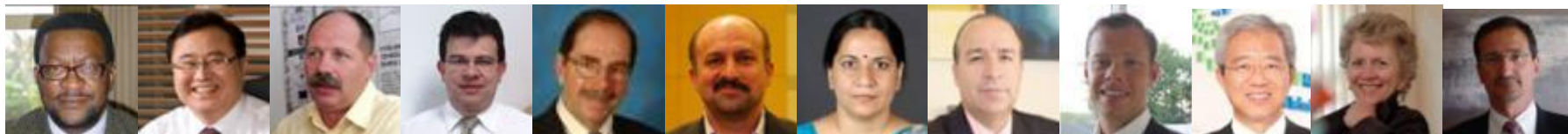
Treasurer
Jean François Balducchi
Atlantpole
France



Director General
Secretary of the Board
Luis Sanz
IASP , Spain



Former President of the IASP
Asia Pacific Division
Dr. Janekrishna Kanatharana
Thailand



International Board of Directors

Science Park Network

Thailand Science Park

- Pathumthani

Northern Science Park

- Chiang Mai

North Eastern Science Park

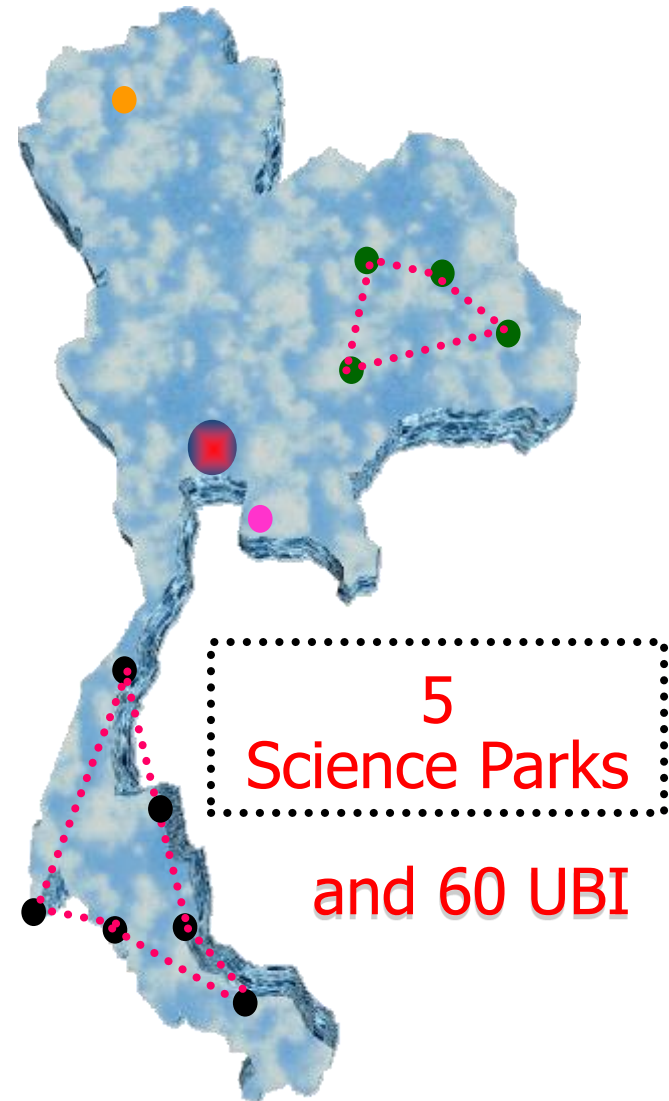
- Khon Kaen, Nakhon Ratchasima
- Maha Sarakham, Ubon Ratchathani

Southern Science Park

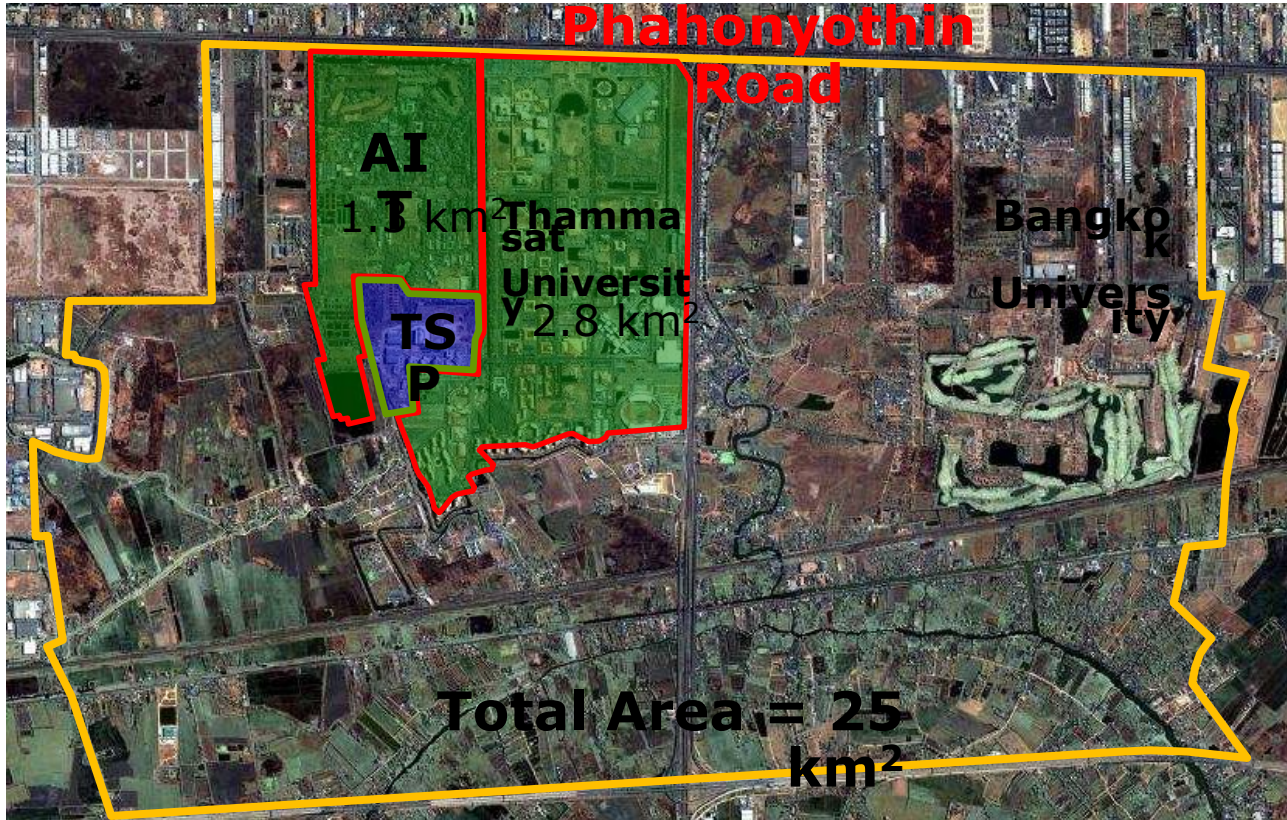
- Songkhla
- Phuket, Pattani, Phatthalung,
Surat Thani, Nakhon Si Thammarat

Eastern Science Park

- Chon Buri



Pathumthani Science City



Hub or R&D Personnel

- RD&E ~6,000
- Post-grad. students (Master&PhD.) ~4,000
- Under-grad. Students ~25,000

>10 Universities

Asian Institute of Technology
Bangkok University
Eastern Asia University
North Bangkok University
Pathumthani University
Rajamongkol Thanyaburi Uni.
Rangsit University
Shinawatra University
SIIT
Thammasat University
Valaya Alongkorn Rajabhat Uni.
Etc .

Industrial Parks:

- Navanakorn
- Bangkokadee
- Rojana
- Hi-Tech
- Bangpa-in
- etc.

Leading Research Institutes

- National Science and Technology Development Agency
- Thailand Institute of Scientific and Technological Research
- Public Company R&D Center : TOT, PTT, SCG, Betagro, etc.

Access to The *Red Line* Mass Transit System Project: Bangsue-Rangsit-TU

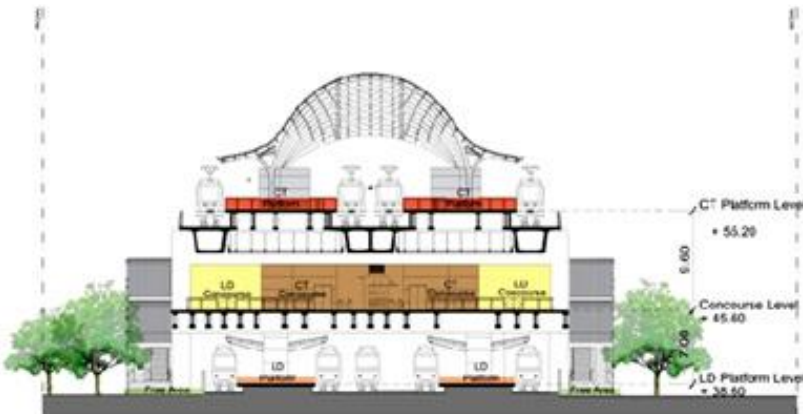


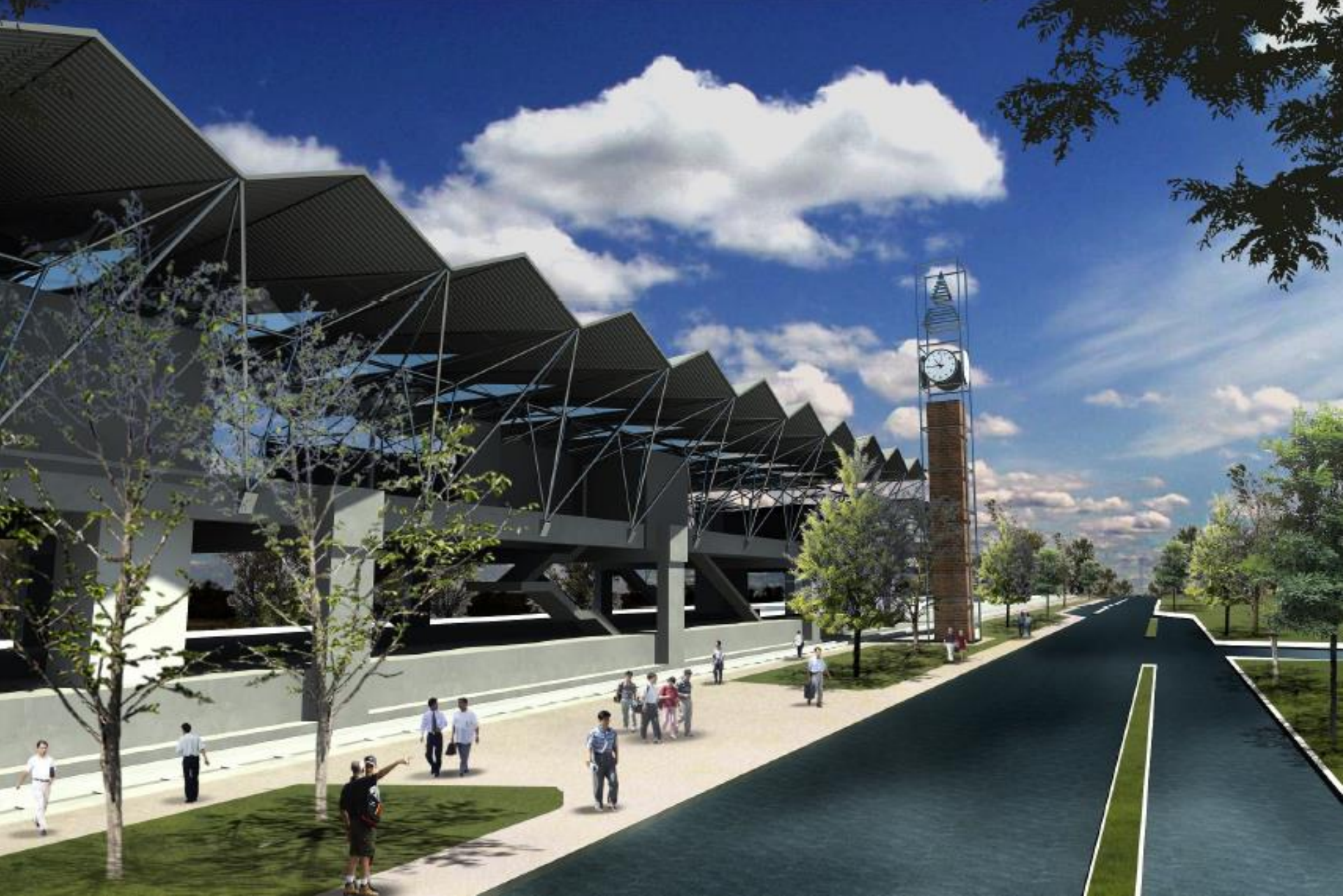
- Project Timeline: 2011-2016
expand and will open in 2019
- Length: 36.3 Km.
- Total budget 75,548MB

Source:

http://www.railway.co.th/resultproject/project_redline.asp?redline=3

Last update on: 25 January 2013





INNOVATION CLUSTER II

Key Infrastructure for Thailand Science Park Phase2

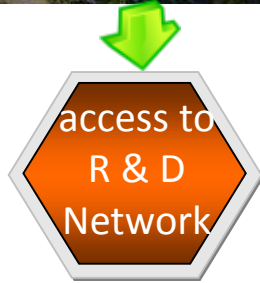
- To enhance the competitiveness of the private sector.
- To host joint/interdisciplinary research projects between National R & D Centers, Universities, and/or Companies.
- To house important national S&T infrastructures.



Our capacity to host additional 150 new tenants and more than 2,000 professionals.

Promoting Research & Innovation in Industries

Thailand Science Park – An Innovation Hub



International Community in TSP

Aug 2016

No.	Tenant	Country of Origin
1	JEOL Asean Technical Center	Japan
2	Keihin Asia Bangkok	Japan
3	National Univ. Corp. Tokyo Institute of Technology	Japan
4	Institute of Advanced Energy Kyoto University	Japan
5	Polyplastics Asean Technical Solution Center	Japan
6	Shimadzu Bara Technical Center	Japan
7	Sumitomo Rubber Industries	Japan
8	Taisei-Kogyo (Thailand)	Japan
9	Ueno Science Tech Laboratory (Thailand)	Japan
10	Nakashima Medical Technical Center (Thailand)	Japan
11	Lion (Thailand)	Japan
12	The e-ASIA JRP Secretariat Office	Japan
13	Air Products Asia Food Technology Center	USA
14	ECOLAB Southeast Asia Regional Technical Center	USA
15	Zoetis (Thailand)	USA
16	BIOSCI (Thailand) , VSN Group	UK
17	Emsland Asia Food Innovation	Germany
18	TUV SUD (Thailand)	Germany
19	InS Thai, IS Industries	France
20	RPD (Thailand)	Spain
21	DSP Comm (Thailand)	Australia
22	Bio Talk Technology (Thailand)	Taiwan
23	Austrianova (Thailand)	Singapore

BOI Privileges & Incentives

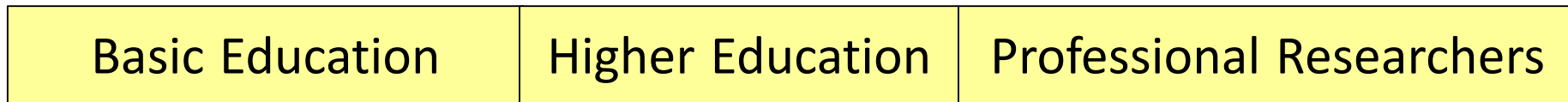
For R&D, Scientific Laboratories

Engineering Design, Calibration, Electronics Design

- Import **Tax Exemption for Machineries**
- Corporate Income **Tax Exemption for 8 Years**
- **50% Corp. Income Tax Reduction for 5 more Years** after Tax Exemption Period Ends
- Corporate income tax exemption **without cap.**
- **Work Permit and Visa** Facilitation for Foreign Specialists and Researchers
- **Revenues from selling R&D products** get same tax exemption

Mission: Human Resource Development

Preparing S&T Human Resources

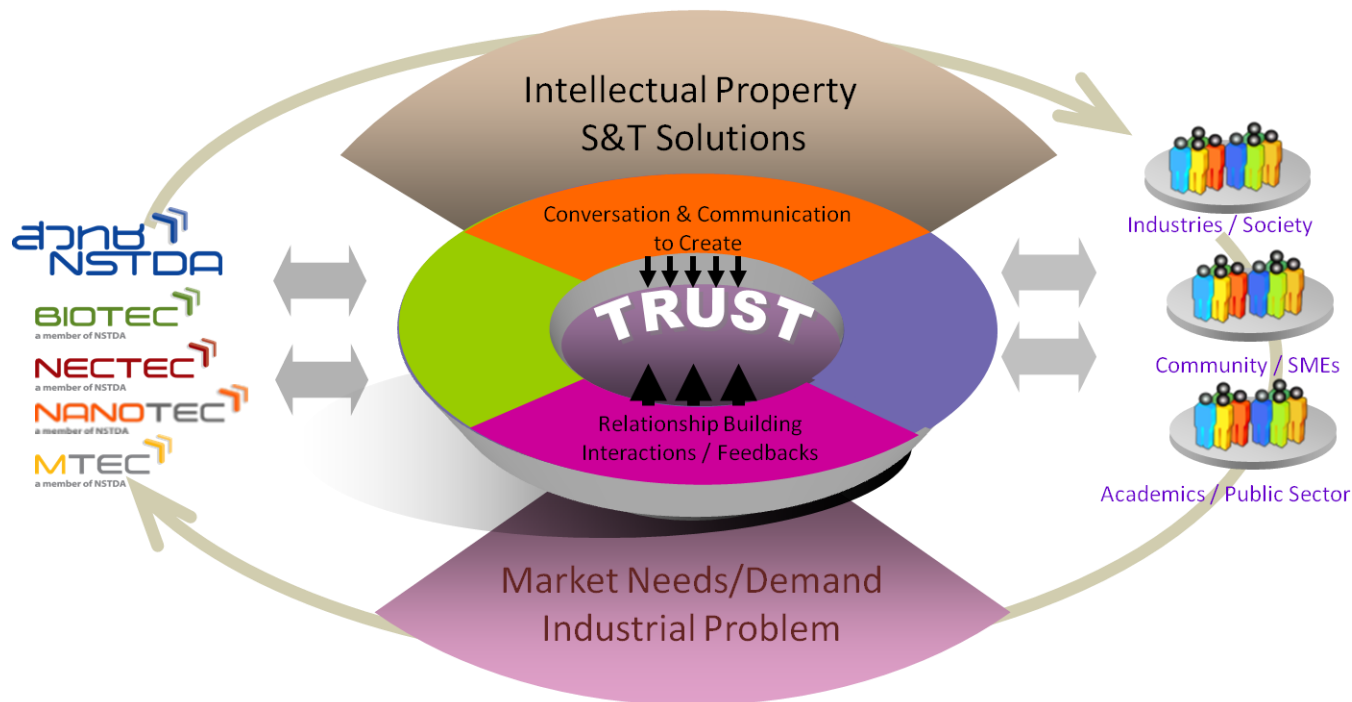


Personnel are supported by National Research Centers, Thailand Science Park, and members of Innovation Clusters (universities and private sectors)

Mission: Technology Transfer

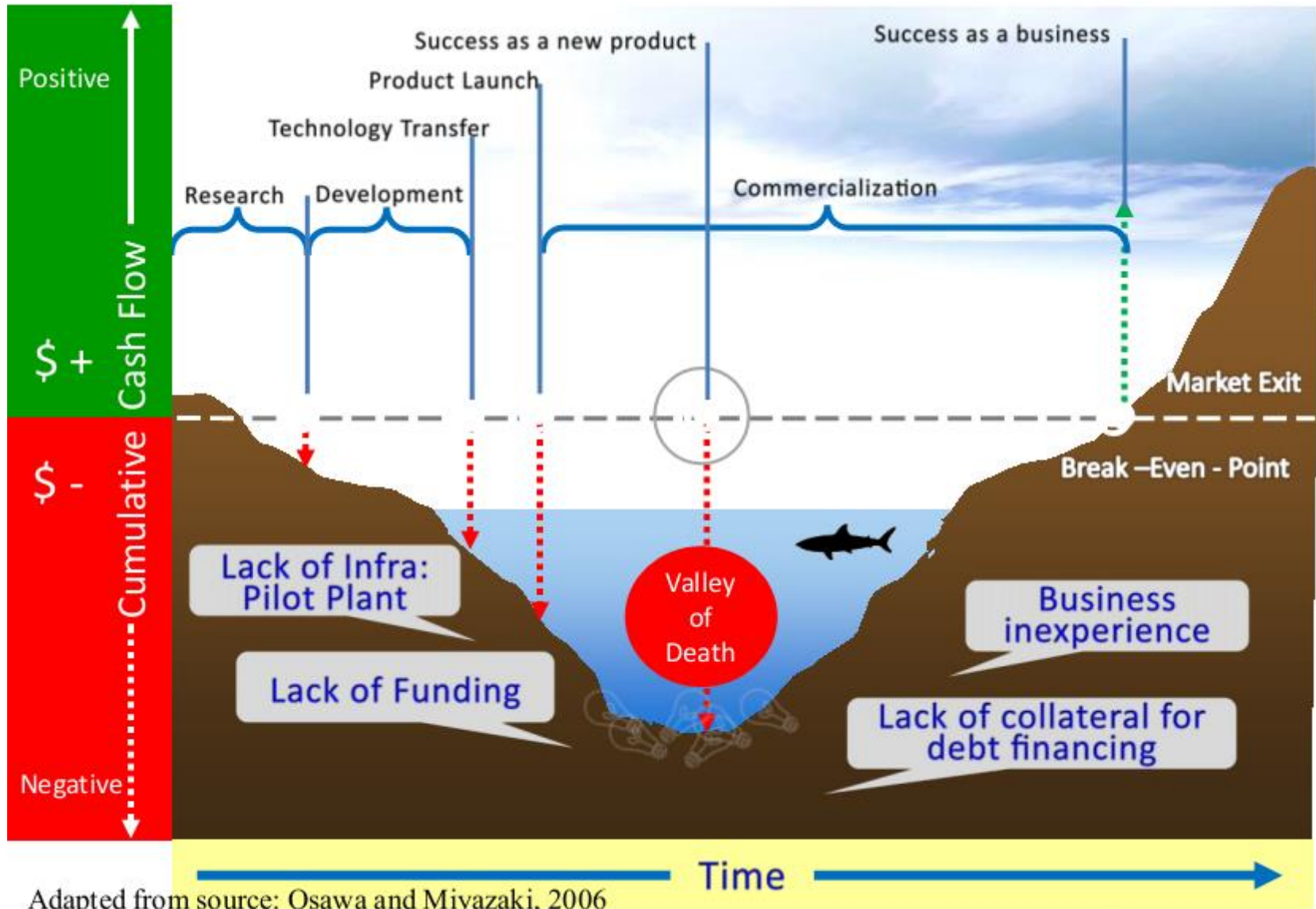
Driving S&T Capability of Thailand

- ❁ Technology transfer/diffusion mechanisms to increase national competitiveness through S& T
- ❁ Supporting mechanisms for successful commercialization
- ❁ Linkages between NSTDA and industries/society



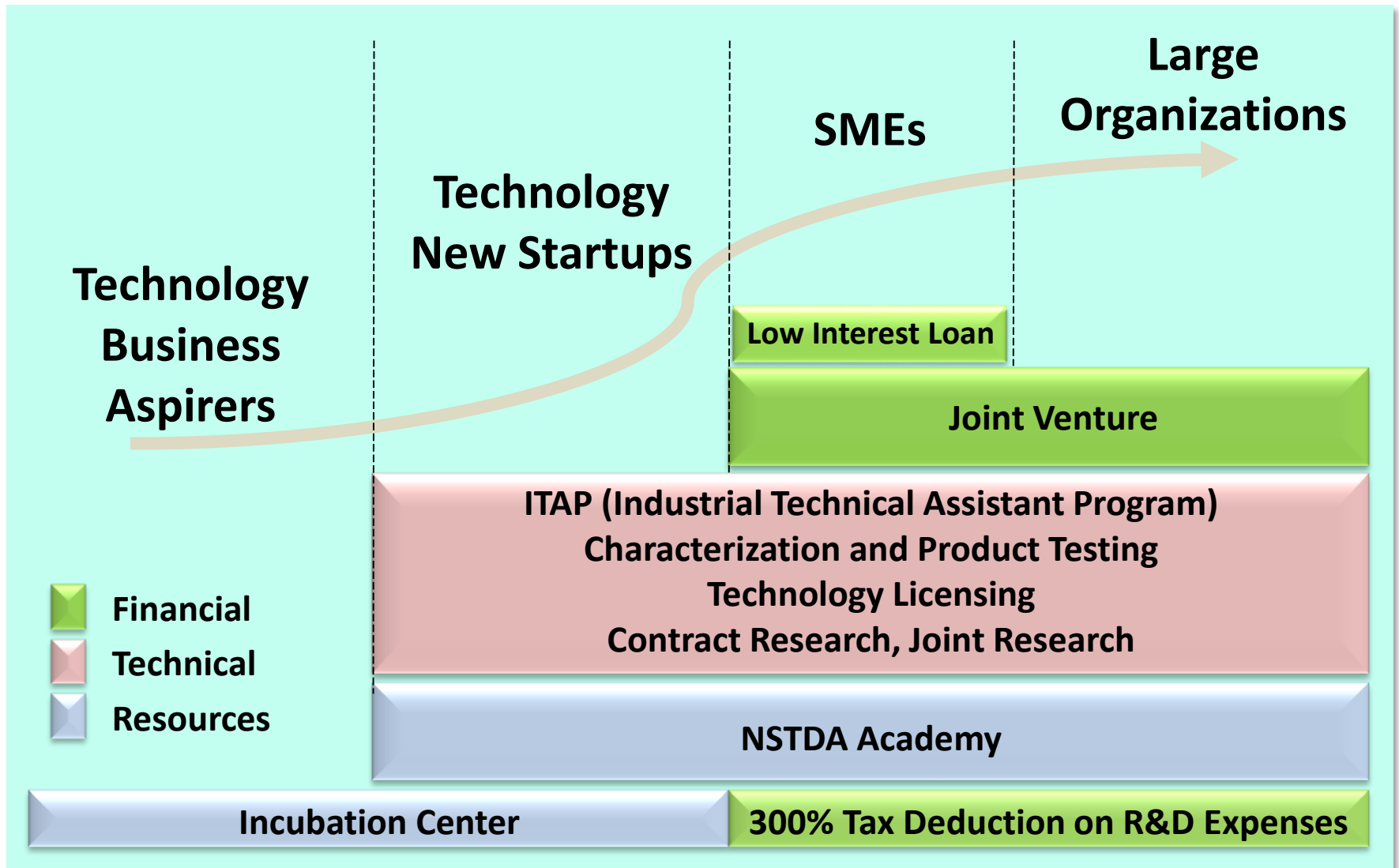
Collaboration is the Key to sustainability

Helping Startups to Cross “Valley of Death”



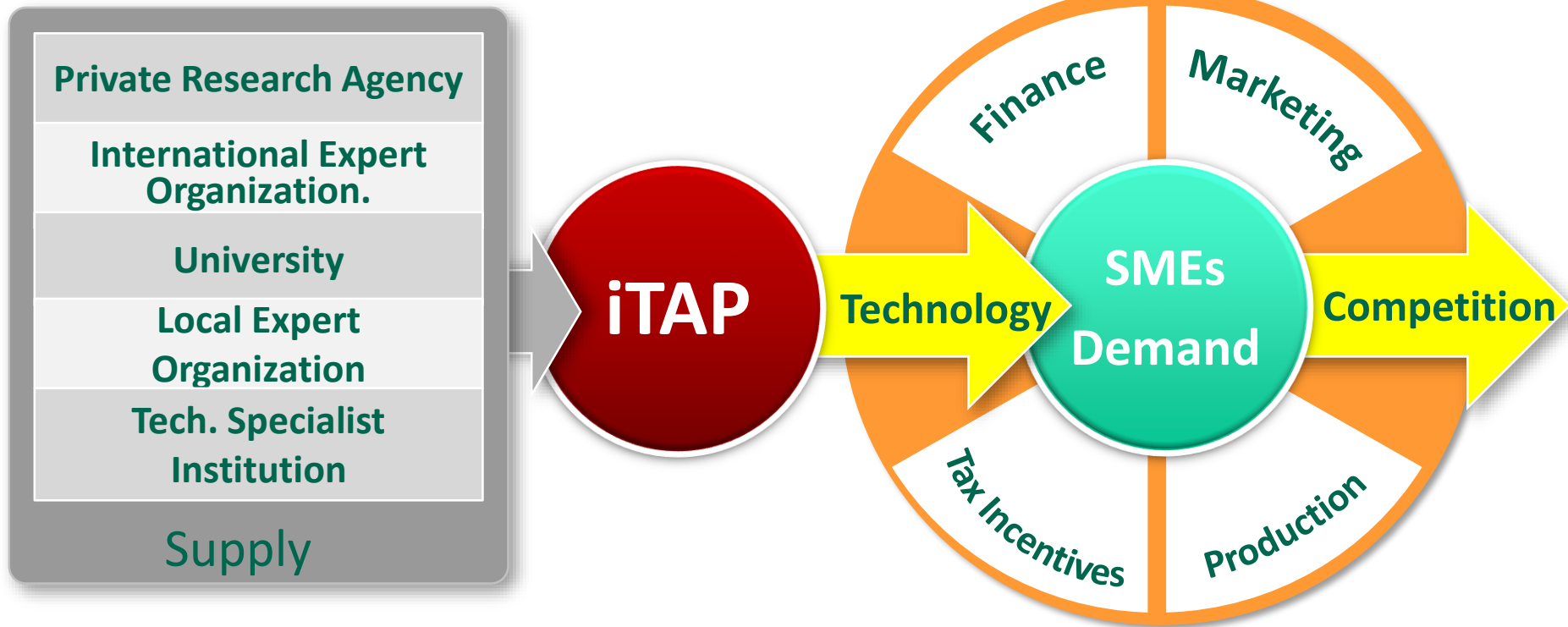
Adapted from source: Osawa and Miyazaki, 2006

NSTDA Supporting Mechanisms



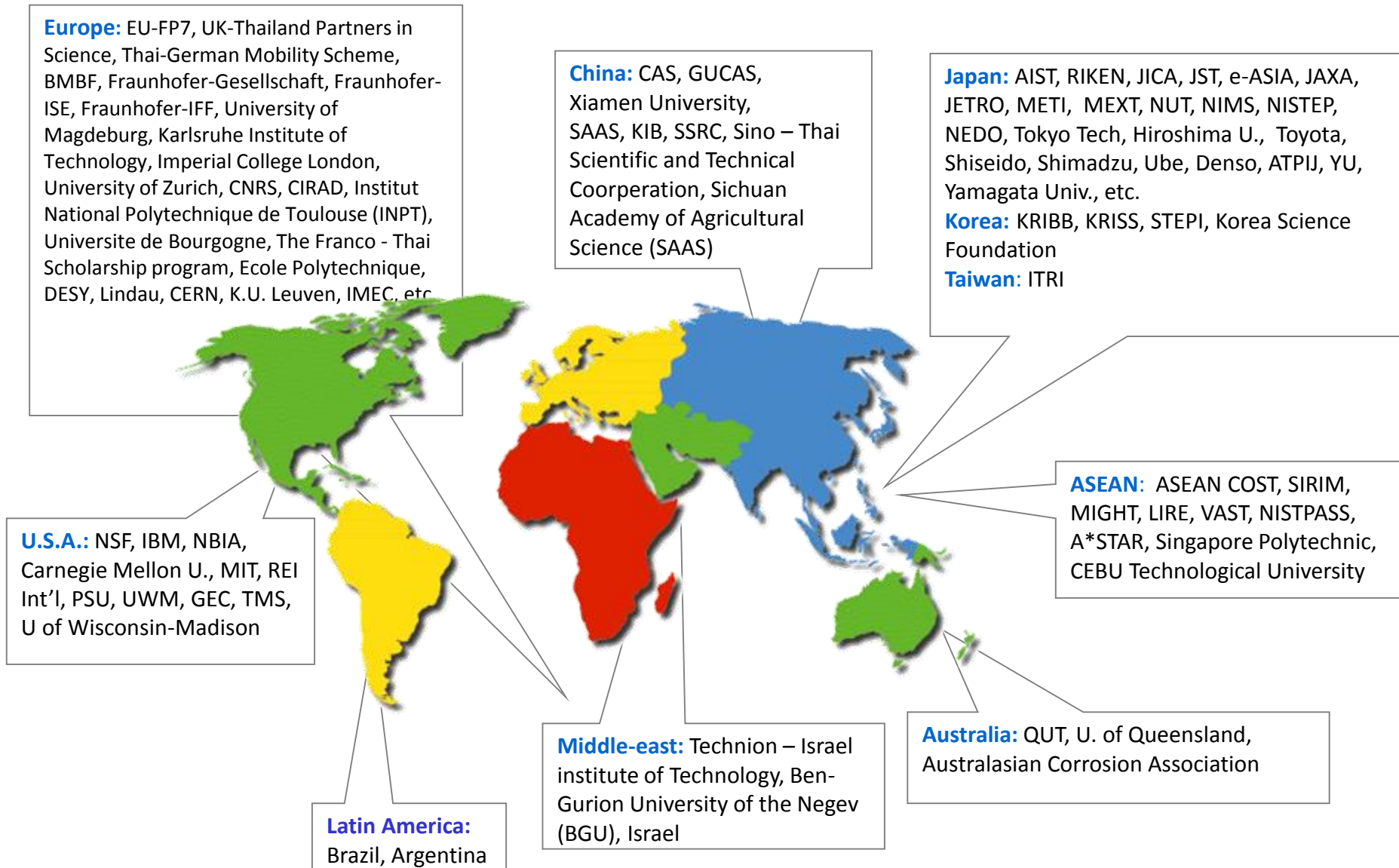
Enhancing Technology Capability of SMEs

Industrial Technology Assistance Program (iTAP)



NSTDA International Collaborations

NSTDA International Collaborations



Type of International Collaboration in S&T

- Bilateral/Multilateral Collaborations
- Joint Research
- Consortium
- Collaborative Workshop/Training Programmes
- Researcher Mobility Scheme
- Co-Funding Cooperation Program
- Etc.

10 targeted industries with investment privileges

- **5 existing industries (First 5 S-Curves)**
 - Next-Generation Automotive
 - Smart Electronics
 - Affluent, Medical and Wellness Tourism
 - Agriculture and Biotechnology
 - Food for the future
- **5 new industries (New 5 S-Curves)**
 - Robotics
 - Aviation and Logistics
 - Biofuels and Biochemicals
 - Digital
 - Medical hub

Eastern Economic Corridor (EEC) and Eastern Economic Corridor of Innovation (EECi)



Infrastructure



Business, Industrial clusters and Innovation hub



Tourism



New cities and communities



Thank you

A Driving Force for
National Science and Technology Capability



National Science and Technology Development Agency (NSTDA)

111 Thailand Science Park
Phahonyothin Road,
Klong Nueng, Klong Luang
Pathum Thani 12120
Thailand

Email: ic@nstda.or.th