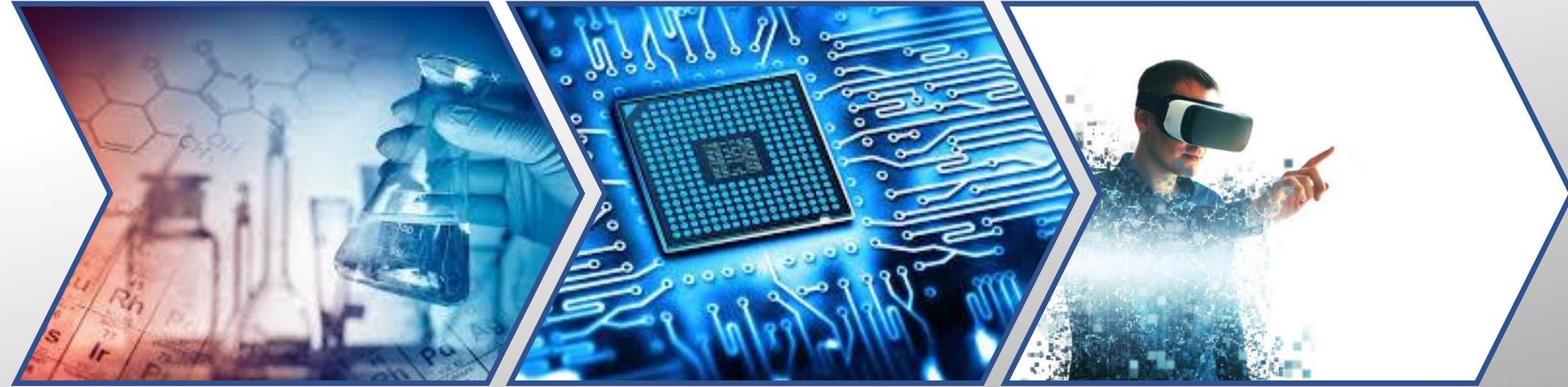


# Thailand's Transformation through



Science  
Technology  
Innovation



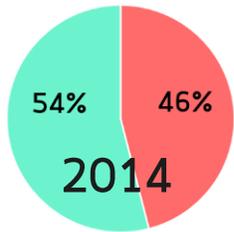
Suvit Maesincee  
Minister of Science and Technology

19 March 2018

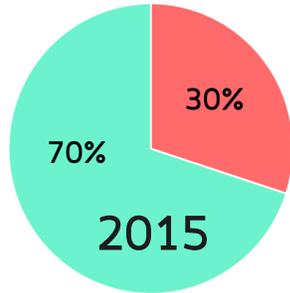
# Thailand's STI is Moving Forward

## Thailand's R&D Expenditure in 2016

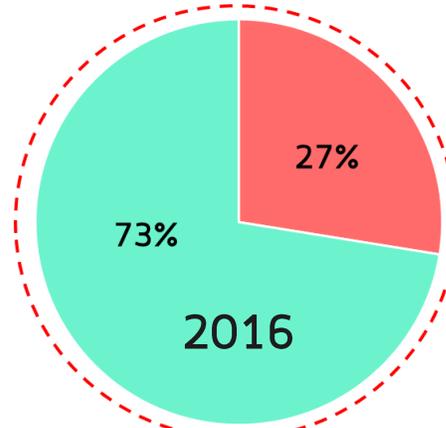
0.48 % GDP  
63,490 Million Baht



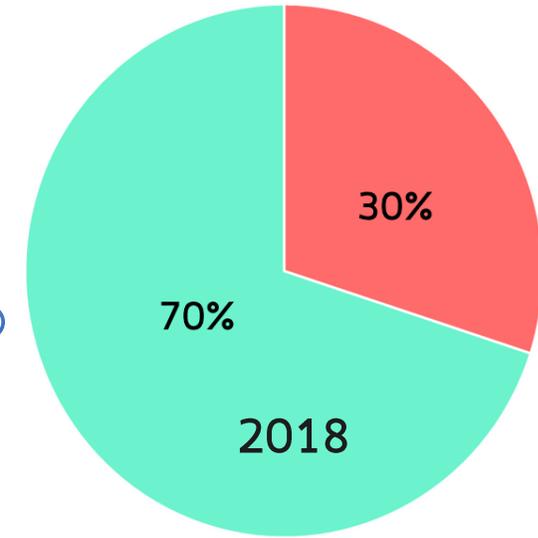
0.62% GDP  
84,671 Million Baht



0.78% GDP  
113,527 Million Baht



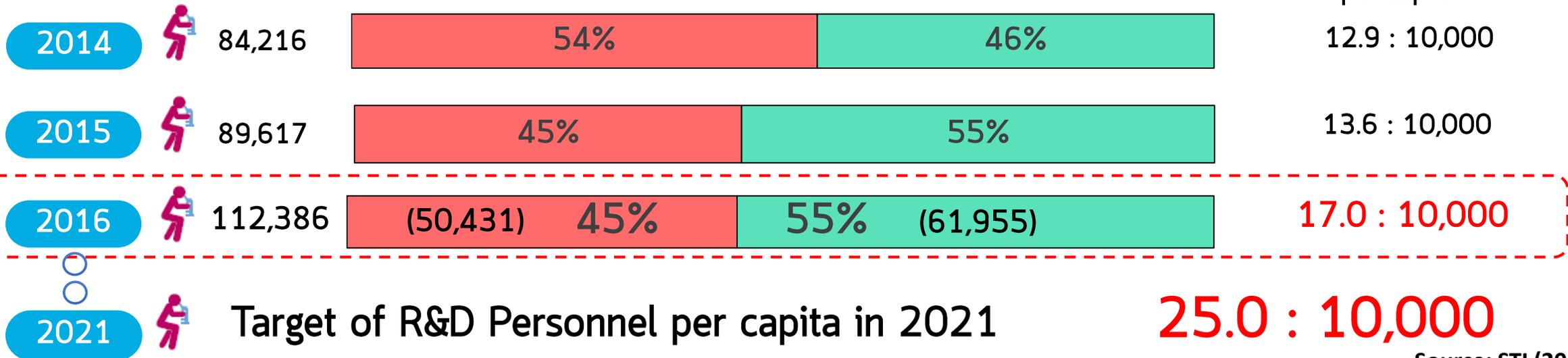
Target in 2018  
**1% GDP**



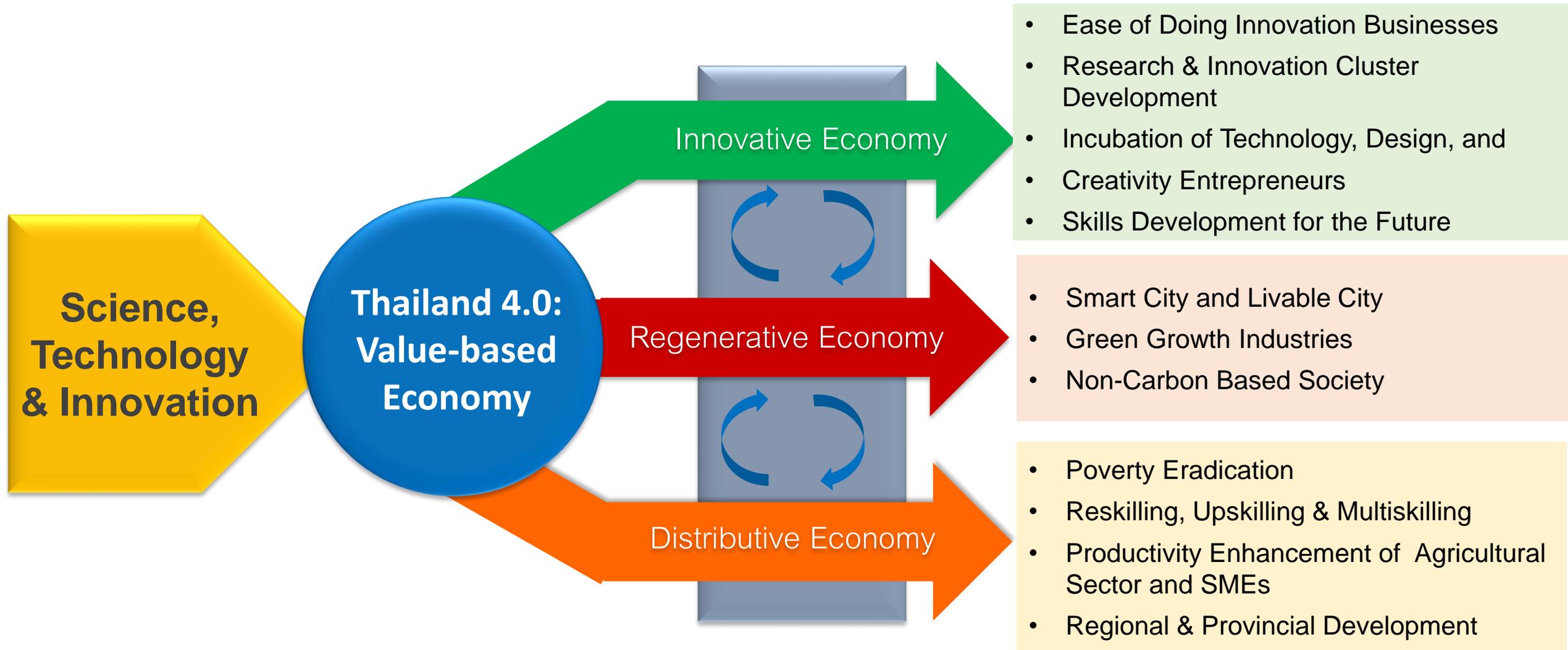
Public Sector  
Private Sector

## No. of R&D personnel per capita is increasing continuously

# of R&D personnel (FTE) per capita



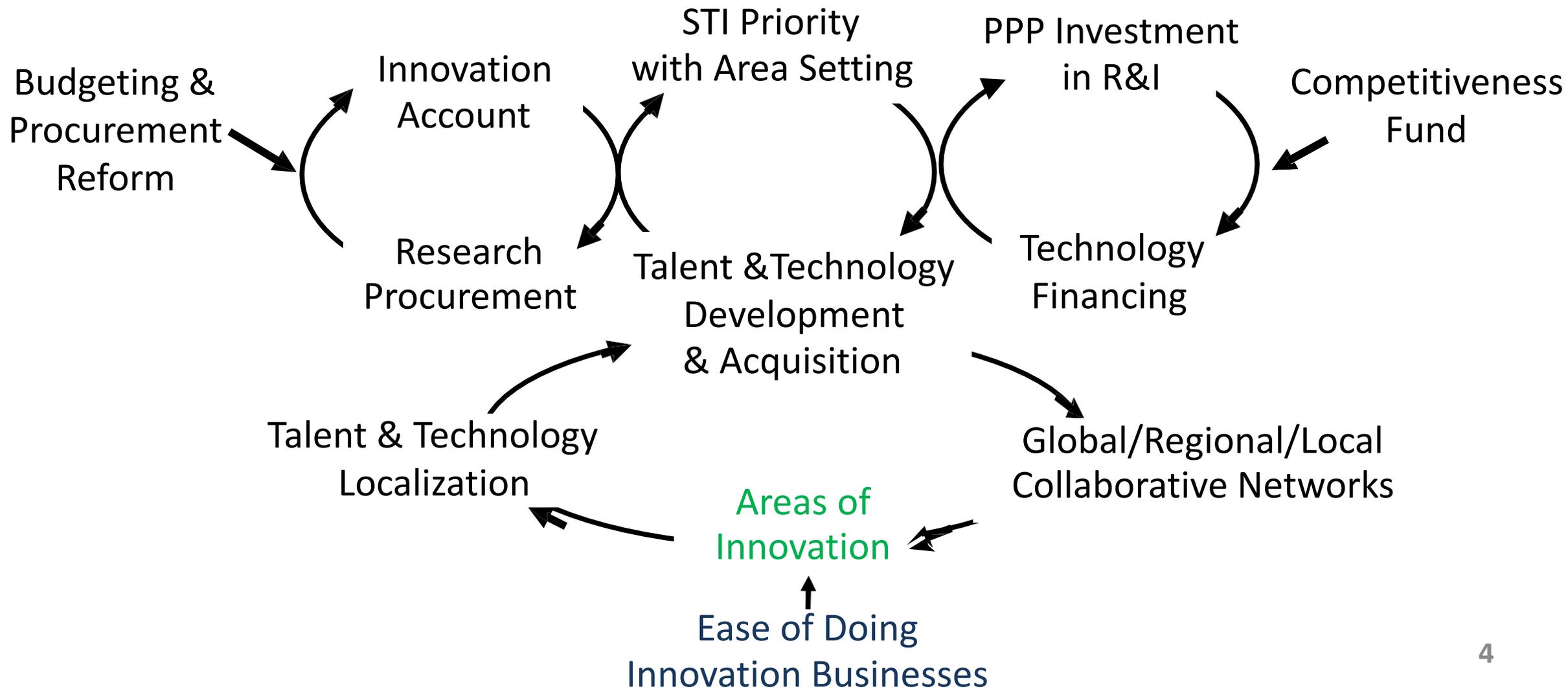
# STI as a Key Driver for Thailand 4.0



# STI Strategic Map

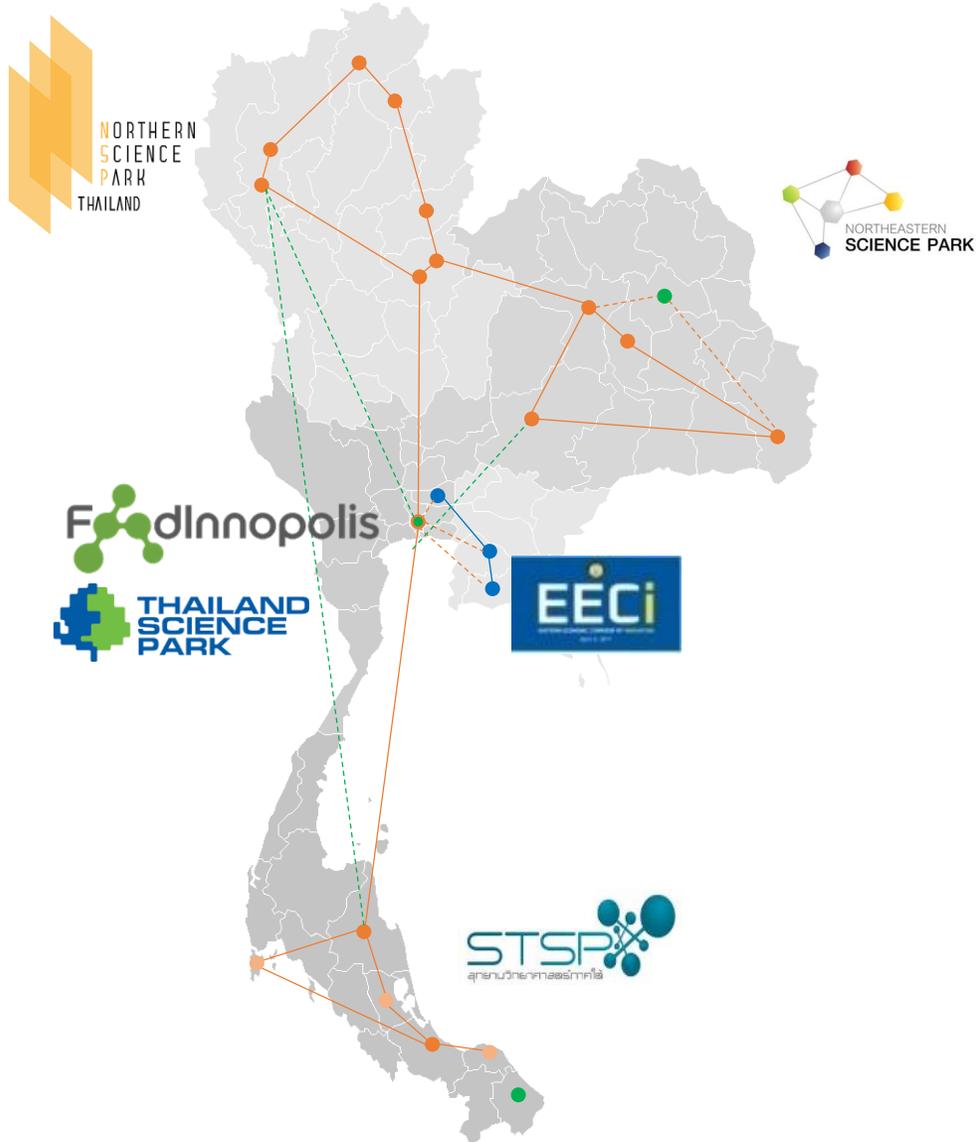
Thailand 4.0

Key Technologies  
of National  
Importance





# Areas of Innovation



Internationalization: EECi



Specialization: Food Innopolis



Regionalization: Regional Science Park



# Eastern Economic Corridor of Innovation (EECi)

## Wangchan Valley, Rayong (approx. 1,360 acres)



## 3 Innopolis



### Key Features

- Frontier & Translational Research
- Research Procurement
- Area for Regulatory & Technological Sandbox
- National Quality Infrastructure for Target Industries

## Space Krenovapolis, Chonburi

approx. 50 acres



# 6 Focused Industries in 3 Innopolis



**Modern Agriculture  
& Biotechnology**



**High Performance Battery  
& Modern Transports**



**Aerospace & Aviation**



**Biofuels & Bio-  
chemicals**



**Intelligent Systems**



**Medical Devices**



**ARIPOLIS**

**BIOPOLIS**

**Construction Start: Oct 2018**  
**Ready to Operate: Oct 2020**

**Triple Helix / Quadruple Helix  
Innovation Ecosystem  
Open Innovation**



**Innovation Clusters**



**SPACE  
KRENOVAPOLIS**

**Ready to Operate**

# EECi at Wangchan Valley



Initial Investment (2013-2016)

**9,000 MB**



Sponsored by



Further Investment (2017-2022)

**3,000 MB<sup>++</sup>**

Total Investment in 10 years

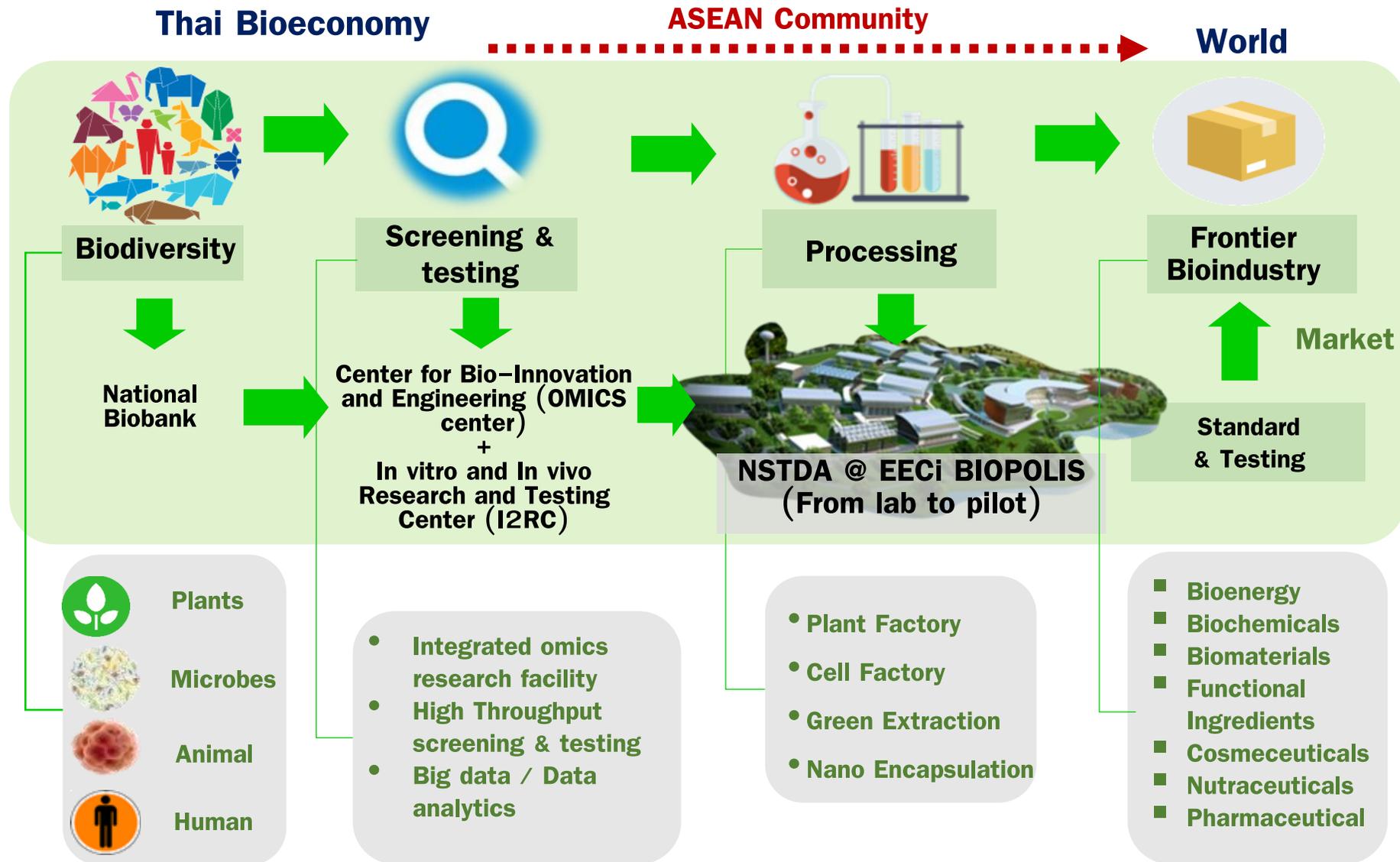
**12,000 MB<sup>++</sup>**

# EECi at Wangchan Valley: BIOPOLIS & ARIPOLIS

## BIOPOLIS & ARIPOLIS in EECi

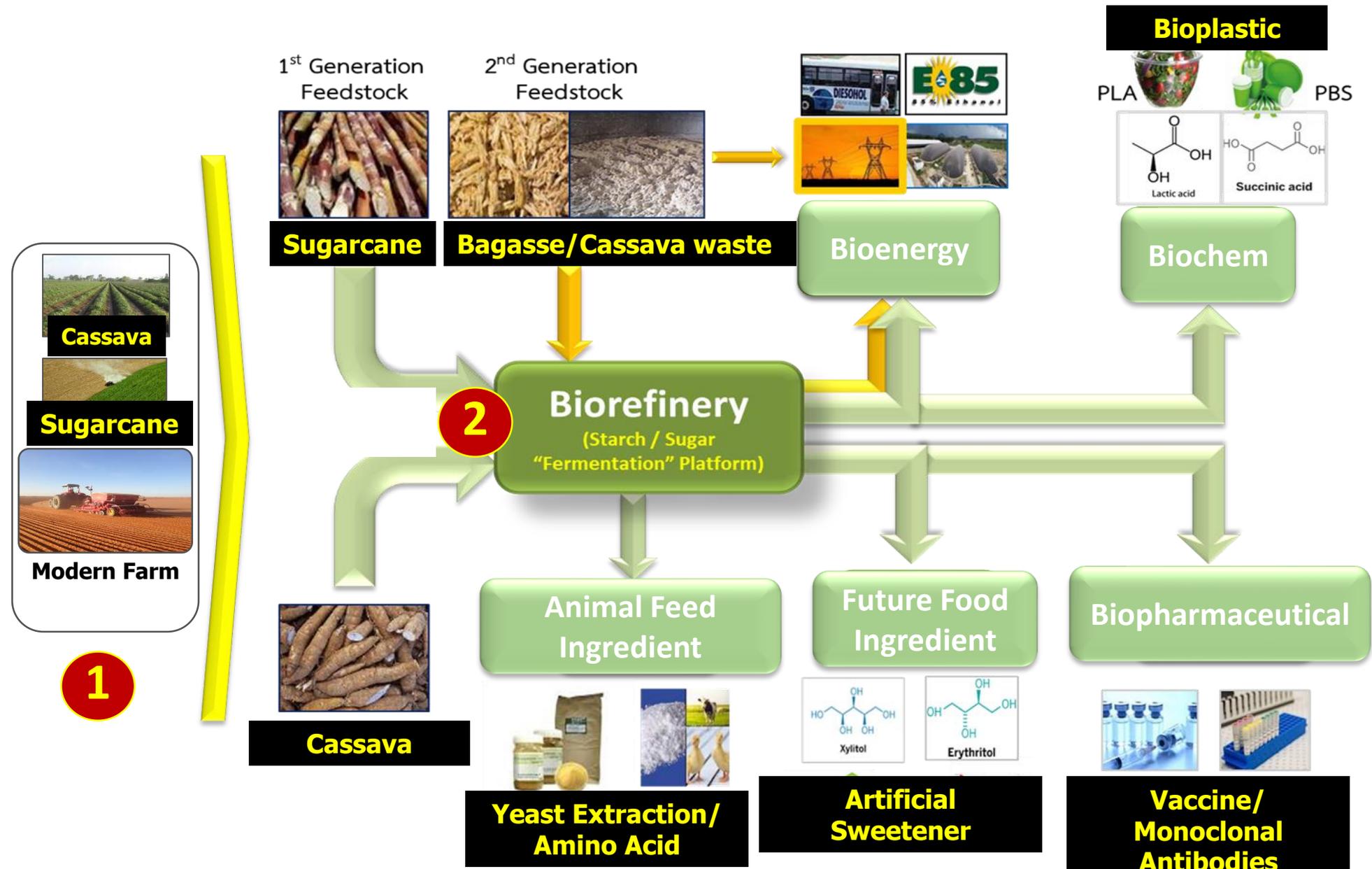


# BIOPOLIS: Enabling Platform for Thailand Frontier Bioindustry

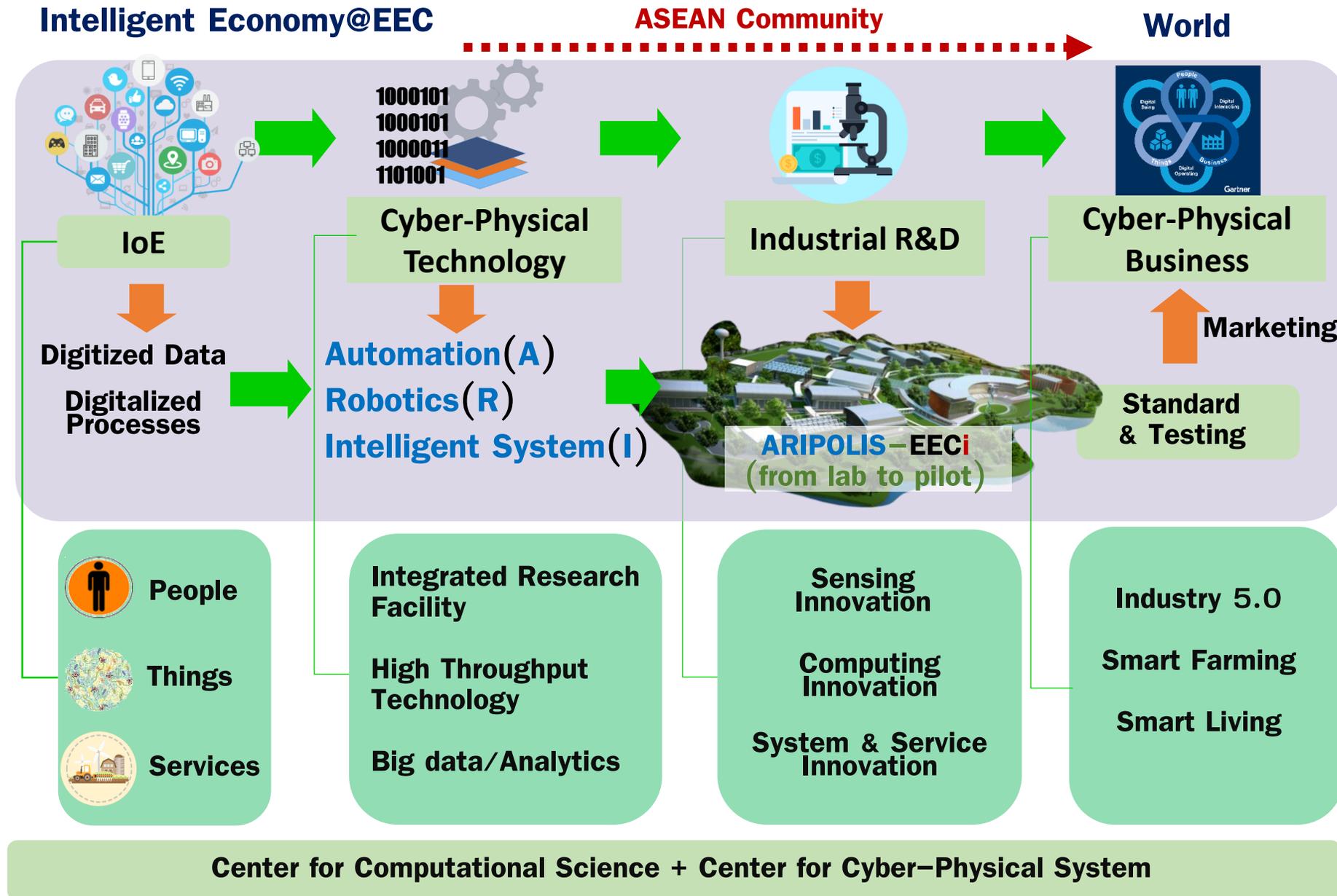


Example

# Transformation's Game Changers: From Value Added to Value Creation



# ARIPOLIS: Completing Thailand Intelligent Economy Roadmap





Example

# EECi Living Lab for Autonomous Vehicles

A regulatory sandbox for next generation vehicles

ADAS

Regulatory  
Sandbox

Testing  
Center

GNSS  
Reference  
Station

Expandable  
Infrastructure

Sensing  
Innovation



# EECi at Space Krenovapolis

## Education

Burapha University



Kasetsart University



## Social

- Laemchabang village
- Sahapat village
- Ao-Udom village



**Sport / Leisure:**

- Badminton court
- Fitness



## Industry

- Laemchabang Industrial Estate
- Pinthong
- Etc..

Digital Park Thailand

### Support Infra.

- Hospital
- Internet (CAT)
- Water supply
- Electricity

### Residence

- +100 Units for staffs
- +24 Units for guests

EECi (SKP)

## Infrastructure



: Aerospace Structures and Materials



: Space Learning Kingdom



: GNSS Innovation Center



: Geo-informatics center



: Air-Space Management and Mission Planning

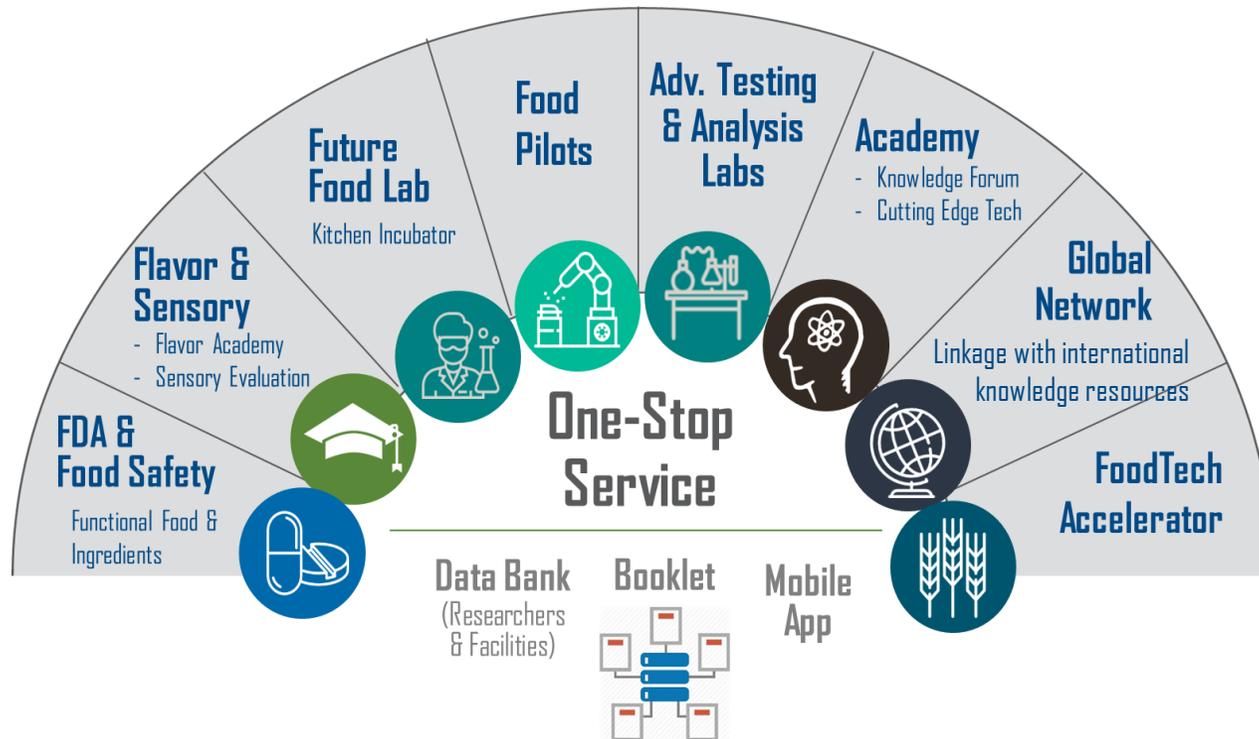


**Space Innovation Projects**  
: In-house Ground - Satellite Innovation

## Examples of Partner



# Food Innopolis



## Collaborative Network & Partners

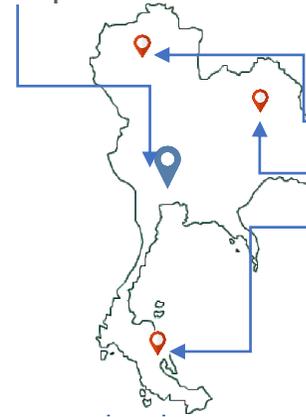
- 36 Private Companies
- 23 Universities
- 12 Government Agencies



# Food Innopolis Development Roadmap



Food Innopolis  
Headquarter

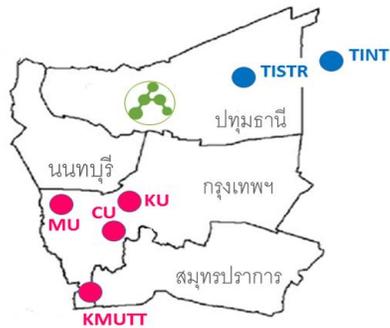


## Regional Science Park

CMU : Healthy & Functional Food

KKU : Functional Ingredients

PSU : Seafood & Halal Food



## FI Phase I

@ Thailand Science Park

Invite World-Class Food Contract Research Organization (CRO) to establish in Food Innopolis

## FI Phase II

@ RSP, Universities, and Government Agencies

## FI Phase III

@ Private RDI Center



# Regional Science Park



Northern Science Park  
(Chiang Mai)

- Rice Innovation
- Agriculture and Food Processing
- Software & Digital Content
- Energy & Material Innovation



Northeastern Science Park  
(Khon Kaen)

- Smart Devices
- Livestock
- Area-Specific Disease
- Energy Storage



Southern Science Park  
(Songkla)

- Rubber-based Research
- Food and Processing
- Healthcare
- Smart Farming

# Ease of Doing Innovation Business

- National Quality Infrastructure
- Innovation Lists
- Research Procurement
- Bayh-Dole Act
- Regulatory & Technical Sandboxes
- IP Management System
- Start-Up Business Act
- Etc.