# DIGITAL ECONOMY PROMOTION MASTER PLAN

PHASE 2

2023-2027

by

DIGITAL ECONOMY PROMOTION AGENCY

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# INTRODUCTION

The Digital Economy and Society Development Act B.E. 2560 (2017), Chapter 5: Digital Economy Promotion, Section 35 (1) stipulates that the Digital Economy Promotion Agency has the duty to prepare a strategic plan on promoting the digital economy in accordance with the Thailand Digital Economy and Society Development Plan.

Section 41 stipulates that the digital economy strategic plan must address at least the following issues:

(1) Guidelines to promote use of digital technology in the creation and dissemination of media content that is beneficial to the economy, society, culture, and national security.

(2) Guidelines for fostering business, innovation, and research in digital technology.

(3) Guidelines for stimulating investment and development in digital services and for marketing and delivering them.

(4) Guidelines for promoting and encouraging the digital manpower creation and development in accordance with the country's needs.

(5) Guidelines for digital technology adoption in business and industry.

(6) Guidelines for educating the public, allowing widespread use of digital technology in a cost-effective, productive, and secure manner.

(7) Guidelines for promoting and encouraging the development of digital technology in accordance with universal design standards and the development of assistive technology.

(8) Guidelines for promoting and facilitating investment in digital industries and innovation.

(9) Guidelines for elevating education, research and skills transfer in the technologies and innovations needed to develop our digital industry.

depa has developed the Digital Economy Promotion Master Plan Phase 2 because the period covered under Phase 1 (2018–2022) has ended, and Thailand faces external and internal challenges that are likely to evolve more rapidly in the future, as seen during the Covid–19 pandemic. The Plan takes into account compatibility with national strategies, government policies, socioeconomic conditions and development needs in a variety of fields, especially digital technology within Thailand and around the world today. The Plan will establish a direction for promoting growth of Thailand's digital economy and society that will truly drive sustainable development.

The Digital Economy Promotion Master Plan Phase 2 (2023–2027) which was approved by depa's Board of Commissioners and the National Digital Economy and Society Commission, highlights strategic challenges and effective responses at both the broad level of programs and specific level of projects. The Plan focuses on approaches that will have a real impact and help achieve the nation's goals through collaboration with related agencies. It follows these principles:

1. Achieve the goals of Thailand's national plans
2. Strengthen digital industry to encompass all dimensions
3. Stimulate digital transformation across all industries
4. Recover economy and society from negative impacts
5. Reinvent existing jobs and create new ones across all professions and occupations
6. Serve as a framework for generating opportunities, jobs, and income, to support sustainable growth of the economy.

# ACHIEVEMENTS



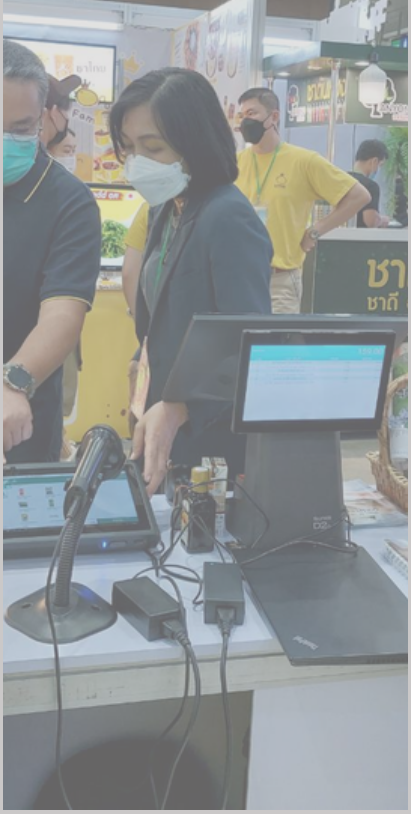
# OF DIGITAL ECONOMY PROMOTION MASTER PLAN PHASE 1

As the primary public agency responsible for implementing the Master Plan, depa has worked to realize its vision of propelling Thailand **"toward a dynamic digital economy based on a society that has digital literacy and skills, with a workforce that can adapt to and create opportunities from technology and digital innovations."** The agency works with partners from the government sector that have related goals, collaborating to transform Thailand into a digital economy and society. By implementing the Master Plan, we are helping the nation digitalize, enhancing quality of life, and boosting the productivity and competitiveness of the Thai business sector.

The Covid–19 pandemic has led to a new normal lifestyle in Thailand. Thais have embraced new technologies, digital services, and online platforms, creating a new way of living. Since our establishment, depa has worked with partners from the public and private sectors, as well as educational institutions and civil society, to implement the Master Plan's strategic framework. The following are the achievements of the strategy and the policies it has driven.







# ACHIEVEMENTS OF STRATEGIC INITIATIVES

OF THE DIGITAL ECONOMY PROMOTION MASTER PLAN PHASE 1 (2018–2022)





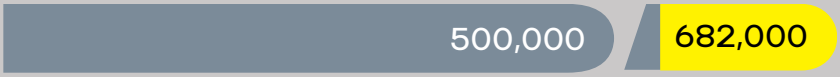




## Strategy 1: Build manpower for the digital age



Digital Manpower




**Target:** 500,000 people
**Achievement:** 682,000 people



Digital Citizens




**Target:** 30,000,000 people
**Achievement:** 20,588,000 people

## Strategy 2: Transform economy towards Digital Thailand



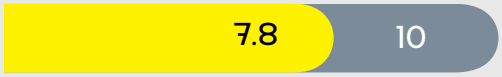
Digitalized Businesses




**Target:** 25,000 companies
**Achievement:** 155,700 companies



Digital Startups Market Value




**Target:** Increase by 10 times
**Achievement:** Increased by 7.8 times

## Strategy 3: Empower communities for digital future



Digitalized Communities




**Target:** 24,700 communities
**Achievement:** 9,800 communities

## Strategy 4: Build digital innovation ecosystems



Smart Cities in Key Economic Zones




**Target:** 7 cities
**Achievement:** 15 cities



Digital Investment Value




**Target:** Increase by an average of 10%
**Achievement:** Increased by 14%

Strategic Goals

Performance Results

# Empower Thais with digital know-how



## Build manpower for the digital era

People equipped with digital literacy:

**20.5 million**

Influencers engaged to spread awareness through media:

**3.5 million views**

Promoted cybersecurity awareness among seniors, vulnerable groups, people with disabilities, and economically vulnerable people:

**30,000 people**

**682,000**
workers

gained digital skills meeting industry needs

**300**
schools

provided courses in coding, STEM, IoT and AI skills
15,700 students | 5,009 teachers




# Transform economy towards **Digital Thailand**

**Develop** digital entrepreneurs
**Digitalize** the traditional economy

**280** factories and companies

**10,800** SMEs and farmers

achieve **digital transformation** using services of Thai digital providers

Foreign Direct Investment
**3 billion baht**

Escalated digital startups

**123 companies**

**9 startups** secure Series A funding

**8 startups** expand in Thailand and abroad

**7 startups** enter the government procurement market

Creating economic value of over **15.8 billion baht**

Value of digital industry in 2020:

**1.29**
trillion baht






Empower communities
# for digital future

Help people embrace
digital technology and innovation
**to strengthen their communities**
and increase self-sufficiency

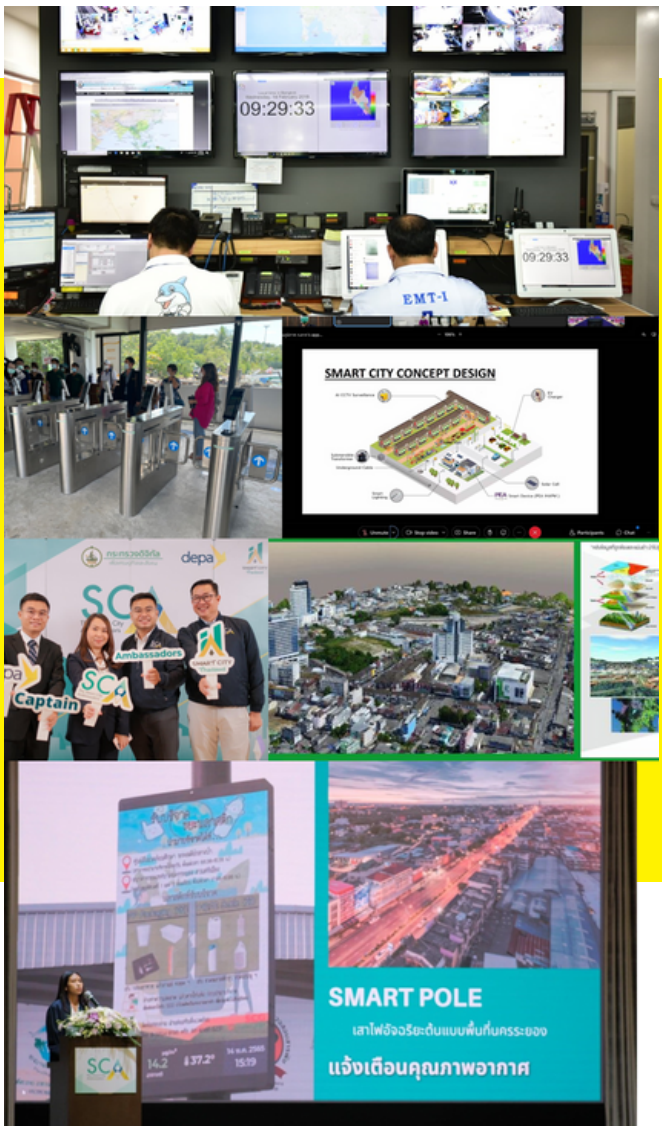




**9,800** communities

- Supported local know-how
- Enhanced quality of life of community groups and community enterprises in rural areas with internet service, digital hardware and digital platforms

# Build digital innovation ecosystems




**15** smart cities receive official Smart City certification and logo

## Smart City

A new framework to promote development at the local level

Installed infrastructure and developed local ecosystems that strengthen digital economy and society.



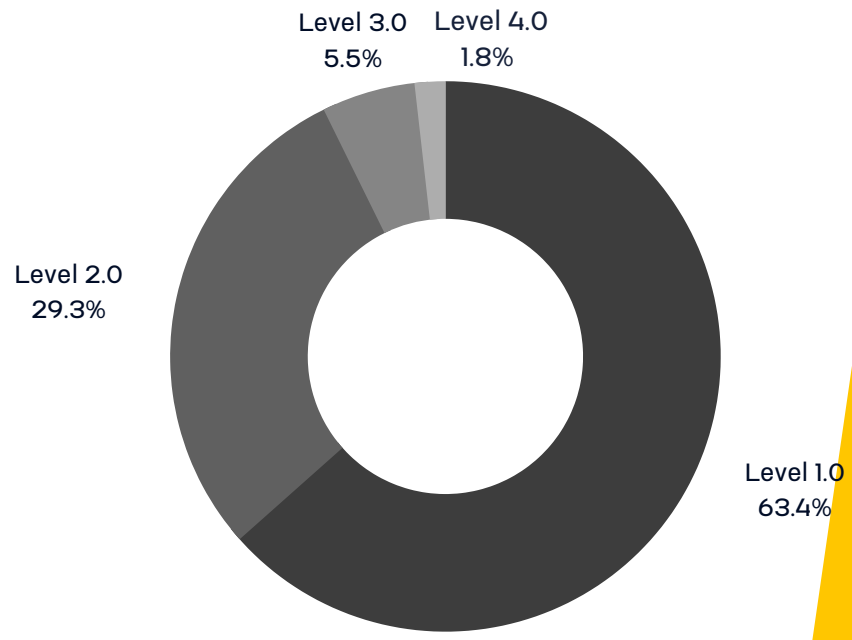
**Thailand Digital Valley**




**National Delivery Platform**




**Health Link**




Thailand's digital density rates at **Level 1.0-2.0,** a key indicator of national digital development

# Achievements of strategic initiatives

Ratio of **digital industry value compared to GDP: 7.89%**

## Value of digital industry per GDP

(5 industries: Hardware & smart devices, software, telecommunications, digital services, and digital content)

| | | |
|---|---|---|
| 2018 | 1.31 trillion baht | 8.0% per GDP |
| 2019 | 1.25 trillion baht | 7.4% per GDP |
| 2020 | 1.29 trillion baht | 8.2% per GDP |

The Master Plan implementation is executed by the following key national committees:

1. The National Digital Economy and Society Commission and depa have collaborated with various agencies to amend laws and regulations and provide policy recommendations. The outcomes have included:
    - Tax measures to encourage SMEs to increase utilization of computer software and services, including a double exemption on corporate income tax when purchasing or utilizing software services and a 2.5 times exemption on corporate income tax, exemption to support workforce development through courses in science, technology, engineering, and math.
    - Measures to increase competitiveness among digital service providers
    - Measures to promote investment in digital park
    - Amendment of laws, rules, and regulations involving business investment, such as advocating for amendments to the Civil and Commercial Code to attract international investors, including venture capital firms, to invest in Thai startups.

2. The National Smart City Steering Committee launched a Smart City Development Master Plan and established a Smart City Thailand Office to mobilize the program together with the local authority. The Committee issued official announcements and a Smart City Development Manual, while implementing measures to support investment in smart city development and amending tax privileges for smart city area and systems development activities. It announced 46 smart city promotion zones across the country and presented official Thailand Smart City logo to 15 smart cities.

3. The Cabinet approved establishment of the Eastern Economic Corridor (EEC) project to serve as a premier economic zone in ASEAN. Under this project, the Cabinet tasked the Ministry of Digital Economy and Society with establishing an Eastern Economic Corridor of Digital (EECd).

   depa was charged with driving progress in technology, innovation, and digital industry through development of the Thailand Digital Valley project. This project builds on an initiative to establish the IoT Institute on a 30-rai (4.8 hectare/11.8 acre) plot of land in the EECd. Thailand Digital Valley facilitates the government's regulatory sandbox policy, which provides places to trial products and innovations under relaxed legal requirements, such as the Thailand 5G Ecosystem Innovation Center (5G EIC).

4. depa has worked with other committees. One is a working group to draft a National Artificial Intelligence Master Plan for Thailand Development, involving the National Electronics and Computer Technology Center (NECTEC) on behalf of the Ministry of Higher Education, Science, Research and Innovation (MHESI) and depa on behalf of National Science and Technology Development Agency (NSTDA) and the Ministry of Digital Economy and Society (MDES). Another is a subcommittee to introduce supportive measures enhancing the competitiveness of digital service providers.

These committees worked together in continually driving laws, regulations, and policies with partner agencies to create an ecosystem that is conducive to the development of the digital economy and society and that attracts digital investment from both domestic and international investors.

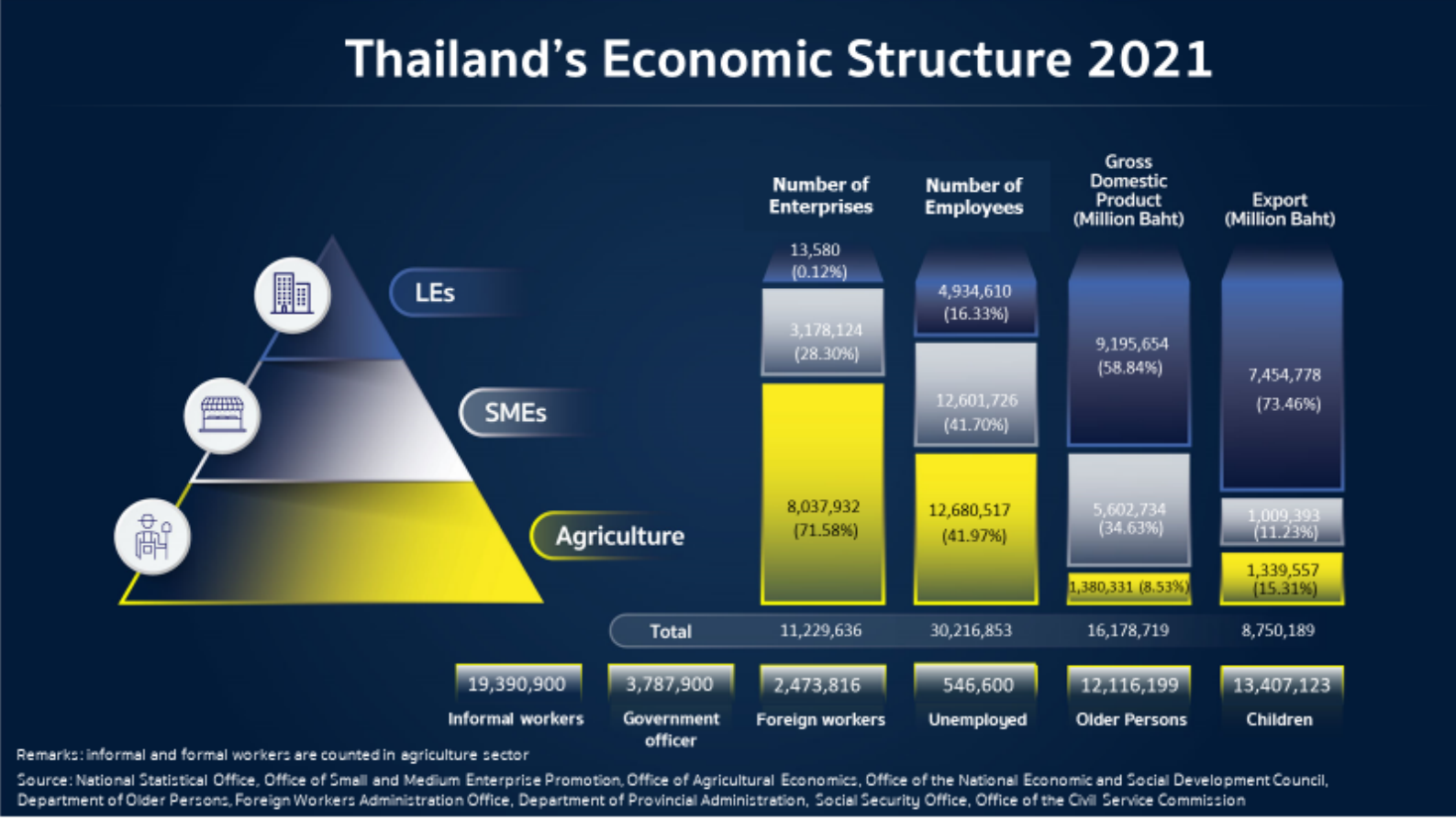
# Policy Initiatives

| | Tax Measures | Non-Tax Measures |
|---|---|---|
| 2018 | Double tax deduction for SMEs buying software or hiring programmers to develop computer programs | |
| 2019 | | Cabinet's approval of a draft act to amend the Civil and Commercial Code in 4 sections:<br>• revisions permitting limited companies to proceed with convertible debentures<br>• gradual granting of shares<br>• rights to purchase shares at a specified price (ESOP) and preferred shares. |
| 2020 | • 1.5 times corporate income tax exemption for expenses related to training employees in STEM skills<br>• Simplified qualifications for smart city development application for both area and city levels<br>• Increased investment privileges in the EECd area | Establishment of the Thailand 5G Ecosystem Innovation Center (5G EIC) |
| 2021 | • Revenue code Amendment Act (no. 53) B.E. 2564 (2021) on e-service taxes<br>• Improved terms and privileges for digital industry | |
| 2022 | Royal Decree issued under the Revenue Code on Tax Exemption (No. 750) B.E. 2565 (2022): Exemption of Capital Gains Tax | 2 initiatives approved by the Cabinet<br>• Thailand's digital products and services catalog<br>• The establishment of "the National Big Data Institute (NBDi)" |

# CHANGING TRENDS

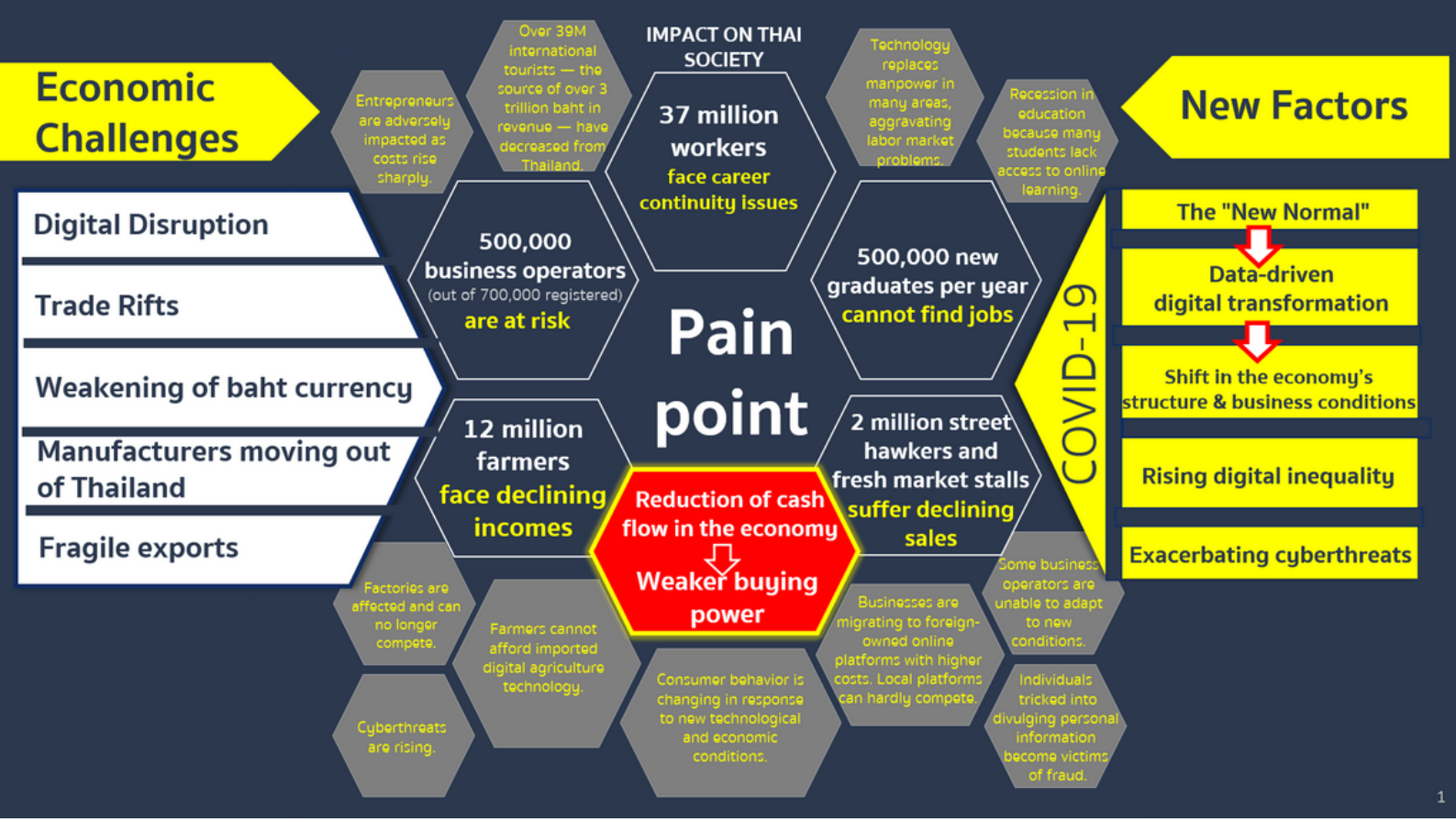


## IN ECONOMY, SOCIETY AND TECHNOLOGY




During the 5-year period of the first Master Plan, Thailand's economic structure has slightly changed. From the total population of about 67 million people in 2021, the bottom of the income pyramid represented 8 million farming households and 15 million agricultural workers. Some 3 million small and medium-size businesses made up the middle of the pyramid. People in the middle and lower-income groups, which are the backbone of the economy, generated only 43.15% of total GDP.

The agriculture sector accounted for 8.55% of the total, while SMEs contributed 34.60%. The combined GDP from farming and SMEs still fell short of the share generated by corporates. Large companies made up the wealthy top of the pyramid, but they number only around 10,000 and are largely foreign-owned. More than 50% of the economy's output came from these firms. This means that the income structure of economy can be viewed as "fragile."




Thailand's fragile economy is hindering people at the middle and bottom of the income pyramid to gain access to digital technology and innovation, particularly in the deep tech sector. Moreover, Thailand faces pressures from climate change, unstable seasons, an aging population, international conflicts, and, most importantly, economic problems from the Covid-19 pandemic, now in its third year. The tourism sector has not fully recovered, causing a slump in business and economic momentum.

Covid-19 has been accompanied by digital disruption across every sector. Many people have been able to embrace digital technology and thrive. But many others cannot adapt. Some have limited access to digital devices. Some are simply unable to utilize digital technology. This became obvious in the education sector, where teaching and learning have shifted to online channels. Some students have been unable to continue their studies because they lack up-to-date devices. And many older adults are unable to use mobile applications at all. These problems have created a pervasive digital divide.

To support the nation's development during the next five years, it will be crucial to upgrade three major sectors of the economy:

1) Tourism: Revamp the tourism sector to adapt to the new normal, so that companies can use digital technology to create possibility, bring in visitors, and increase revenues.

2) Agriculture: Increase farm productivity using big data and integrate local agriculture sector into global supply chains.

3) Logistics: Optimize logistics systems, which will help the tourism and agriculture sectors cut costs and enhance income, link both sectors together. This will significantly strengthen the nation's fragile economy.

As illustrated here, Phase 2 of the Master Plan aims to create a sustainable competitive edge through digital technology.



Building sustainable digital competitive advantages will drive economic and social development, based on four pillars:

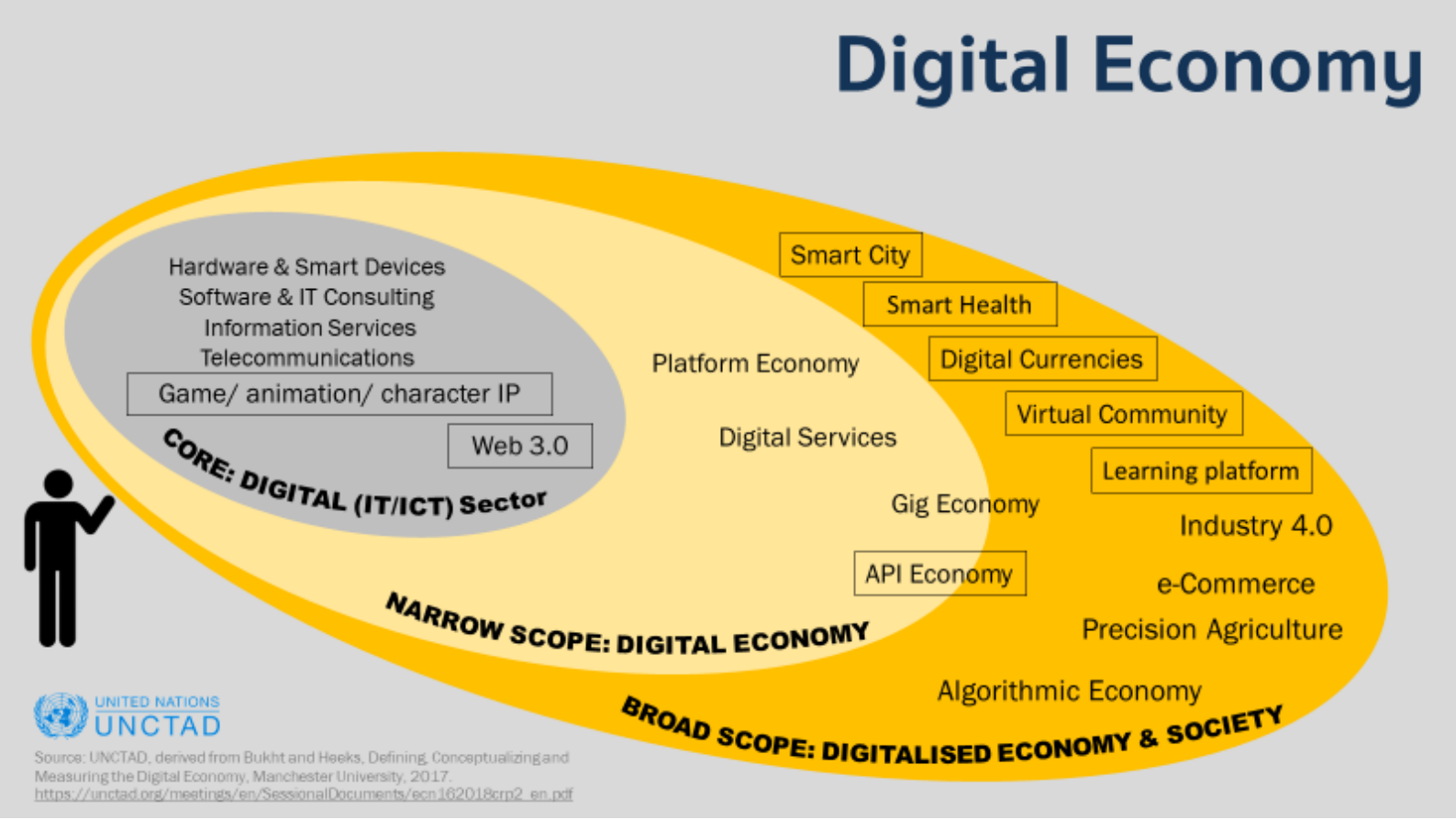
1) Digital access: Increase ability to access digital technology and information, and to store data and use it. Develop manufacturers' ability to manipulate digital data for rapid prototyping. Enable businesses to use digital platforms for mass customization to meet needs of individual customers.

2) Digital connectivity: To bridge economic and social gaps, our real and virtual worlds require an upgrade in digital connectivity among devices, people, businesses, and society, which will empower people to thrive in both worlds simultaneously.

3) Digital data: As devices, people, businesses, and society become more interconnected, they will generate huge volumes of valuable data. Thailand should increase capabilities to utilize this data to support economic and social development.

4) Digital automation: The era of automation facilitated by increased digital access and interconnectivity of devices, people, businesses, and society has resulted in the generation of oceans of data. This big data can help facilitate automated production, management and distribution of goods and services.Automation produces results that are fast, accurate, complete, and ready for use, all without human intervention.

The most significant pillar of sustainable competitiveness is digital data, which in this context encompasses both big data and deep tech, such as blockchain and artificial intelligence.




## Definition of
# Digital Economy

We have developed our concept of the digital economy by adopting the definition proposed by the United Nations on Trade and Development (UNCTAD), adjusting it to fit Thailand's specific context.

The concept has four parts:

**1. The core** of the digital economy is the digital sector itself: information and communi-cations technology, or ICT.
This includes:
(1) Hardware and smart devices
(2) Software and IT consulting
(3) Data services
(4) Games, animation, and production of licensed characters
(5) Telecommunication products and services, next-generation internet, or Web 3.0
This empowers technologies like machine learning (ML), Big Data, artificial intelligence (AI), and blockchain to function to their full potential and become more efficient. More importantly, Web 3.0 is the critical infrastructure that supports the metaverse.

**2. In a narrow sense, digital economy** refers to economic activities that are directly related to creating or using digital inputs. In addition to ICT itself, this sector encompasses digital services and platforms such as the popular new applications that have created the sharing economy. Other apps have spawned the gig economy by enabling part-time workers and freelancers to find employment. API, or application programming interfaces, are protocols for interconnecting digital services, allowing one application to access data or features from another. A business can generate income by providing an API as a product.

**3. In a broad sense, digital economy** refers to all economic activities that make any use of digital technology in their operations. It even includes the use of digital technology by traditional businesses and the informal sector.

Every industry is undergoing digital transformation, as legacy processes evolve into seamless, data-driven supply chains. Digital transformation has generated oceans of data. Digital technologies and innovation can integrate this data to create new businesses and new forms of products and services: e-commerce, social commerce, Industry 4.0, Agriculture 4.0, and Service 4.0 as well as the emerging Algorithm Economy that utilizes smart technologies such as 5G, IoT, AI, cloud computing and so on.

Humans are being replaced by automation that enables computers to think and evaluate, as well as synthesize data. Algorithms are now an integral aspect of advanced technology that is being used to improve the well-being of individuals and our society. Even cash is being replaced by digital money: e-wallets, prepaid cards, and metro cards, as well as cryptocurrencies like Bitcoin and central bank digital currency (CBDC).

In the broadest sense, the digital economy encompasses digital society. This is the new society that embraces digital technology and innovation, which shape lifestyle, culture, and social interaction. It also includes communications systems and solutions, as well as advanced telecommunications and wireless connectivity, such as internet of things (IoT), 5G, cloud computing, big data, human–computer interfaces, and so on.



The digital society is intertwined with the economy and so it promotes economic development. Digital society means new concepts like smart cities as well as smart services like smart health learning platforms. These and other innovations can enhance the quality of life throughout our nation.






# Definition of Digital Industry

## Hardware and smart device industry

Manufacturing, assembling, and selling devices that have a central processing unit (CPU), as well as input devices and peripherals like monitors, disks, consoles, tapes, printers, plotters, digitizers, scanners, etc. Smart devices are typically connected to other devices or networks through wireless protocols like Bluetooth, Wi-Fi, 5G cellular networks, etc., which work interactively and automatically.

***Computing hardware and smart devices include:***

1. Computers (PCs, notebooks, tablets, servers)
2. Data storage equipment
3. Printers
4. Peripherals
5. Smart phones and other smart devices

## Software and services sector

Development of programs and software. Software consists of both general-use software and specific applications.

***Software includes:***

1. Software designed for broad usage and ready-made software that generates revenue from licensing fees when deployed in organizations.
2. Software as a service (SaaS) refers to software that is accessed via websites or the cloud and is installed on the servers of software developers. It generates revenue on a per-use, monthly or annual basis.

***Software services include:***

1. Software systems integration services
2. Software maintenance services
3. Software customization services
4. Consulting and training services

## Digital content industry

Producing, publishing, selling, and providing digital content, such as animation, computer graphics, movies, television programs and audio recordings. Also, publishing or distributing digital games, digital educational content, new media in AR/ VR/ MR formats, cartoons, and characters as well as e-books.

***Digital content includes:***

1. Animation
2. Games
3. Characters
4. e-Books
5. Digital audio and music

## Digital services industry

Digital services are enabling technologies and services.These are platforms that serve as intermediaries between buyers/users and sellers/business owners. The platform provider manages end-to-end processes. A platform operator can be either a central service provider that creates the platform technology or a technology service provider that owns the business.

***Digital services include:***

1. e-Retail (Marketplaces, Mails, Direct to Consumer)
2. e-Logistics (Goods & Food Delivery & Booking)
3. e-Tourism (Flights, Hotels, Vacation Rentals)
4. Online Media (Content, Video on Demand, Music on Demand)
5. e-Advertising (Online Advertising Platform, Sentiment Analysis: Eco-system)
6. Fintech (Payment, Lending, Insurance)
7. HealthTech
8. EdTech

## Telecommunications industry

Related industries

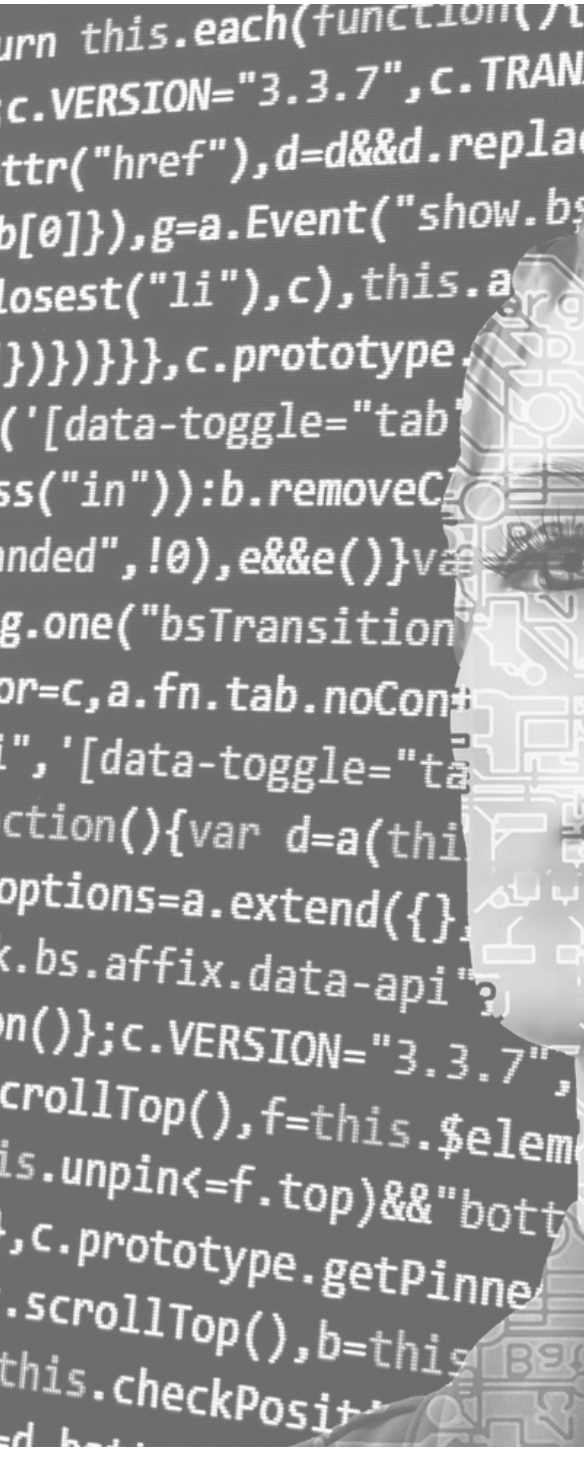
1. Manufacturing and sales of telecommunications equipment, broadcast transmission equipment and receivers.
2. Telecommunications and broadcasting services, such as landline telephony; voice and non-voice mobile telephony; VOIP; high-speed internet; digital communications via international internet backbones using terrestrial and submarine cable systems; digital communications via satellite and ground stations; and broadcasting services.
3. Over-the-top (OTT) and streaming content services providing text, images, audio and video that consumers can access via devices like mobile phones, tablets and computers. These can be categorized by type of income as follows:
    - Subscription-based services, such as Netflix.
    - Services that earn income from advertising fees, such as YouTube.
    - Services that charge a one-time fee for download of single unit of content that can be viewed an unlimited number of times, such as Apple's iTunes.
    - Services that charge a fee for each use of content, such as pay-per-view

Due to the fact that digital industry is rapidly evolving in tandem with changing trends in technology, these definitions are merely a starting point for understanding the sector's nature and scope, and they should be reviewed frequently as conditions change.

# THE ESSENCE OF THE MASTER PLAN



## VISION, GOALS AND STRATEGY



# VISION:

**TO DEVELOP A STRONG, RESILIENT, AND DYNAMIC DIGITAL ECONOMY AND SOCIETY BASED ON ADVANCED HUMAN CAPITAL, TECHNOLOGY, AND INNOVATION.**

## MISSIONS:

1. Accelerate digital transformation by transitioning the traditional economy into the digital economy.
2. Strengthen digital industry across the board and accelerate its development of innovation.
3. Encourage the workforce having intermediate and advanced digital skills to transform work processes and create new jobs in every field.
4. Support Thais to leverage new technology and data to create opportunities and generate employment in the new economy.
5. Promote equitability and inclusiveness throughout the economy, ensuring quality social development.
6. Promote development of an ecosystem that facilitates growth of the digital economy and society.

# Goals and Indicators

**LEVEL 3.0**

Digital Density Index

**30%**

Contribution of digital economy to GDP



**BELOW 5 TIMES**

Less than 5 times of income gap between the top-earning 10% and the bottom 40%

**6%**

SME productivity growth

Thailand's economic sector shall maximize its usage of digital technology and data, growing the value of the digital economy while also enabling people to use digital technology and data knowledgably, ensuring quality social development in every dimension of life.

# Implications

The Digital Economy Promotion Master Plan supports the objectives of the National Economic and Social Development Plan No. 13 (covering 2023 through 2027) in developing a high-value economy, a society of opportunities, and equitability

to attain a per-capita income of at least $9,300, or about 300,000 baht, by 2027.

**9,300 USD**

per-capita income in 2027



# Strategies

## Strategy 1

### Transform human capital for the digital economy and society:

- Build new skills for new generations
- Upskill and reskill existing workforce
- Fill up a digital talent pool

**500,000** digital workers

## Strategy 2

### Transform traditional economy into high-value digital economy:

- Accelerate digital startups to reach international level
- Accelerate creation of value by digital industry
- Accelerate digitalization of the manufacturing and service sectors
- Accelerate digitalization of the core economy

**12%** annual increase in digital industry value

**10%** increase in investment in digital industry

**100,000** digital businesses



# Vision:

Develop a strong, resilient, and dynamic digital economy and society based on advanced human capital, technology, and innovation.

## Strategy 3

### Create new opportunities and ensure inclusive economic development:

- Build livable smart cities
- Create inclusive new opportunities
- Build a quality digital society

**Upgrade 1 city in Thailand** to rank among world's top 10 livable smart cities

**95%** of people have digital literacy and access to digital technology

## Strategy 4

### Optimize use of digital infrastructure:

- Optimize digital infrastructure for all
- Develop competitiveness of the Thai digital ecosystem

**3** major digital infrastructure projects

**3** leading digital corporates invest in Thailand




Based on our past achievements and clear goals for promoting the digital economy over the next five years, we will prioritize four development strategies:

**Strategy 1**

## Transform Human Capital for the Digital Economy and Society

The 2021 World Digital Competitiveness Rankings identified Thailand as weak on digital capacities. Yet in all sectors of the nation's economy, digital skills are in high demand as technology advances.

Our human capital strategy seeks to meet industry's rising needs for digital specialists. We will help bolster digital literacy among students at a young age, increase digital skills among people in the workforce, and bring in digital workers from overseas.

***Strategic goal:*** *Develop 500,000 workers with digital skills*

**Strategies**

1.**Build new skills for new generations:** develop the next generation's skills starting at the primary and secondary school level continuing through higher education. Prepare students to become experts in digital technology and innovation. We will collaborate with the Ministry of Higher Education, Science, Research, and Innovation, as well as educational institutions and private groups.

**2. Upskill and reskill existing workforce:** advance digital skills among digital workers and other workers in every field to meet market demand, in collaboration with the Ministry of Labor; Ministry of Higher Education, Science, Research and Innovation; Department of Revenue; Thailand Professional Qualification Institute; private councils and associations; and the Eastern Economic Corridor Office (EECo).

**3. Fill up a digital talent pool:** close the gap in the digital workforce supply by bringing in digital workers from abroad, at the basic, intermediate and advanced levels, in collaboration with the Ministry of Foreign Affairs; Revenue Department; Ministry of Labor; Board of Investment; Digital Council of Thailand; and the Eastern Economic Corridor Office (EECo).

**Programs and Projects**

**1. Reskill/New Skill: Provide new skills for 50,000 young people annually**

- One Tambon, One Digital Scholarship ("One Tambon, One D Scholarship")
  Support students who perform well academically but lack financial resources by providing scholarships to earn a bachelor's degree in digital fields and other disciplines.
- Transformation through coding (xCoding School)
  Offer classes on coding, STEM, IoT, and AI, as well as future digital skills, with a focus on developing digital instructors so that they can train digital students in a sustainable manner.
- Helping youngsters gain digital skills (New Skill Uni-School)
  Promote learning outside the classroom for elementary and secondary school students by collaborating with higher education institutions, using lab instructors, tutoring by students, and digital tools as learning resources. Help the next generation get hands-on learning to develop their digital skills.
- Digital Institute 247 (Digital 247)
  An institute that facilitates self-learning of digital skills via a project-based teaching approach, exploring the real-life challenges of digital entrepreneurs as well as group problem-solving, with professors and digital experts as advisors.

- Dual digital degree programs
  Ramp up the supply of digital graduates by helping them gain a digital bachelor's degree alongside another other discipline. Students can follow their own academic interests and plan their study independently. This approach will give students more flexibility and greater options when studying for employment in the digital world.
- Develop new digital skills while working (Digital Industry dSchool)
  A collaboration between government and the private sector to instill new digital skills by letting students pursue academic study while gaining real–world experience. This will help ensure that students and graduates in IT and related disciplines will find employment in a digital profession.

**2. Upskill and reskill 30,000 existing workers annually**

- Future Digital Skills for All
  Promote digital learning among digital workers as well as personnel in management and support positions through training and on–demand self–learning. Also provide new learning approaches developed by educational technology start–ups (edtech startups)
- New Gen, New Careers
  Enhance digital skills and business know–how of the next generation to prosper in the digital age. Help them gain opportunities to switch to jobs meeting the needs of industry and to work in the new businesses created by digital transformation.

**3. Fill up a digital talent pool with up to 20,000 people per year**

- Nomad Home
  Improve conditions for digital nomads such as accommodations, high–speed internet, safety, local use of English, visas, work permits and laws, as well as government policies supporting investment and business creation. Attract digital professionals and nomads to visit, work, and set up businesses in Thailand.
- Digital Workforce Certification Center
  Promote establishment of digital skills certification centers for workers seeking to pursue digital professions in Thailand, particularly those with primary and intermediate skills, to guarantee their qualifications.




# Transform traditional economy into high-value digital economy

An assessment of Thailand's digital readiness in 2021 showed that the level of digital and data adoption in the economic sector, which includes manufacturing, agricultural, and tourism sectors, was between 1.0 and 2.0. This underscores the need to accelerate the transformation of our traditional businesses into digital enterprises in order to increase productivity, reduce costs, increase agility, improve product and service quality, expand the market, and develop new products, services and business models. Make a transition to smart farms, smart factories and high-value services. Create a robust digital sector in Thailand and speed the growth of digital startups to achieve full digital transformation of the economy.

***Strategic goals:***

- *Digitalize 100,000 traditional businesses*
- *Increase digital industry value by 12%.*
- *Increase investment value of digital industry by 10%*

**Strategies:**

1. **Accelerate digital startups to reach global markets**: elevate digital startups to the international arena by collaborating with the Ministry of Foreign Affairs; Ministry of Finance; Ministry of Industry; Board of Investment; Securities and Exchange Commission; Digital Council of Thailand; and the Eastern Economic Corridor Office (EECo). Encourage digital startups to transform their research and development into products to generate new business locally and internationally. This will help catalyze systemic transformation of our economy and society.
2. **Accelerate value creation by digital industry**: accelerate value creation by collaborating with the Ministry of Foreign Affairs; Ministry of Finance; Ministry of Industry; Board of Investment; Securities and Exchange Commission; Federation of Thai Industries; Digital Council of Thailand; and the Eastern Economic Corridor Office (EECo) to empower our digital industry to become a new and competitive player in the global market.
3. **Accelerate digitalization of indigenous sectors**: accelerate digital transformation of the manufacturing and service sectors by collaborating with the Ministry of Industry; Ministry of Tourism and Sports; Ministry of Higher Education, Science, Research and Innovation; Tourism Council of Thailand; Digital Council of

Thailand; and private sector groups to increase flexibility of business processes, enabling them to adapt to change arising from digital disruption and preparing them for international competition.

4. Accelerate digitalization of the local economy: accelerate digital transformation of the core economy, enhance community economies with digital technology and innovation, and increase agricultural productivity through digital tech and information through collaboration with Ministry of Social Development and Human Security; Ministry of Higher Education, Science, Research and Innovation; Ministry of Agriculture and Cooperatives; private sector associations; and civil society.

**Programs and Projects**

1. A**ccelerate digital startups to enter global markets**

- *Digital Startups Come Home*
  Develop a favorable business environment, particularly through legislation and government policies that support investment and business platforms, to attract growing digital startups and bring back Thai-owned companies incorporated abroad.
- *Global Digital Startups*
  Implement two strategies to accelerate the expansion of digital startups in the global market:
  1) dStartup Go Global: Promote digital startups to the growth stage, while creating sandboxes for trialing digital technologies and innovations. This will grow their domestic market and speed their ability to reach the global market, allowing businesses to grow robustly.
  2) Startup Born Global: Support potential foreign digital startups doing business in Thailand's special economic zones (e.g., Thailand Digital Valley II) and coordinate with international business organizations to provide full support to digital startups.

**2. Accelerate value creation by digital industry**

- *Attract deep tech investment from leading digital companies.*
  Enhance the capability of the digital ecosystem to attract global technology companies in the fields of AI, blockchain and big data to establish operations in the Thailand Digital Valley within the EEC by providing a world-class investment environment and incentives.
- *Turn sunset factories to digital sunrise*
  Transform outdated factories, such as those producing electrical appliances, automotive equipment, electronic components, and others, into facilities that produce ICT hardware and equipment and smart devices for sale in ASEAN and the Greater Mekong Subregion (GMS) or CLMVT (Cambodia, Laos, Myanmar, Vietnam, and Thailand).

**3. Digitalize the manufacturing and service sectors**

- *dTech Consulting Centers/Partners*
  *Provide c*onsultation centers that offer advice on business development and technology and innovation adoption for businesses in order to facilitate digital transformation of traditional firms to promote long–term sustainability.
- *Digital Transformation*
  Assist traditional businesses in sourcing digital technologies and data from competent digital entrepreneurs in order to improve their business operations and management.
- *Digital Platform Development*
  Promote public–private cooperation to establish trustworthy platforms by Thais, for Thais, including development of infrastructure platforms to support business connections via API (application programming interface), with an initial focus on cold chain logistics, food and consumer goods, and agricultural industry.

**4. Digitalize the traditional economy**

- *One Tambon, One Smart Service*
  Empower local know–how by using technology and digital innovation to improve quality of life and incomes of local communities. Provide assistance or subsidies for to increase adoption of technology and digital innovation in rural areas.
- *Digital Stations*
  Encourage all regions to adopt digital technology and smart devices by establishing digital technology and services exhibition centers, showcasing demonstrations and trials, and offering advice on how to go digital.
- *Drone Schools*
  Promote drone pilot education to support various work (in agriculture, logistics, or data warehousing). Help Thai drone athletes join international competitions to stimulate youth interest in emerging and evolving digital technologies.




# Create new opportunities and ensure inclusive economic development

There is a digital divide between urban and rural areas, as well as between younger, tech-savvy people and vulnerable groups that are less adaptable and are unable to reap the benefits of digitalization. To spread digital opportunities, we must promote smart cities, which use cutting-edge, data-driven technology and innovation to optimize city services and management, cut costs, and make better use of scarce resources. For people to enjoy a decent quality of life, happiness and sustainability, urban development must prioritize practical design and involve the business sector and civil society under the notion of livable and modern cities.

***Strategic goals:***

- *Upgrade 1 city in Thailand to rank among world's top 10 livable smart cities*
- *95% of people have digital literacy and access to digital technology*

**Strategies:**

1. **Build livable smart cities:** build livable smart cities by promoting the development of smart cities. Enhancing digitalization both in old cities to improve their livability and quality of life, as well as in new cities to attract investment centered on tech development. To evaluate the readiness of each locality for smart city development, collaborate with the Ministry of Interior, Department of Local Administration, local government administrative entities, and the local private sector.
2. **Build inclusive new opportunities**: create new, inclusive, equal opportunities focusing on opening up new employment and income through leveraging digital proficiency and development of platforms to enhance the quality of life and digital services for marginalized populations, in collaboration the Ministry of Social Development and Human Security; Ministry of Higher Education, Science, Research and Innovation; Ministry of Interior; and Ministry of Finance.

3. **Build a quality digital society:** develop a high-quality, safe digital society by working with the Ministry of Social Development and Human Security; Ministry of Higher Education, Science, Research and Innovation; Ministry of the Interior; and the Electronic Transactions Development Agency to ensure that everyone has the knowledge and skills they need to use digital technologies responsibly, productively and safely.

**Programs and Projects**

**1. Build livable smart cities**

- *National Smart City Pitching*
  To identify the most effective smart city services, the National Smart City Pitching campaign encourages competition in development of new smart services that can be put into practice.
- *City Data Platform as a Service*
  Promote the development of flexible, innovative data platform services for smart cities that can adapt to local needs. City Data Platform as a Service will be a storage and management solution for city data.
- *New Digital Cities*
  Promote the development of new smart cities with areas or ecosystems devoted to the development of future technologies and innovations, such as robotics cities and AI cities.
- *Thailand Smart City Competitive Index*
  Promote mechanisms to boost development of smart cities in Thailand, by comparing smart city progress using global benchmarks, while monitoring proactive central and local policy implementation.

**2. Create new, inclusive, equal opportunities**

- *Open Learning Platform*
  Create a platform for lifelong learning that supports learning activities through online training and courses tailored to labor market needs. The platform will be accessible to people of all ages for free, with certificates awarded upon completion.
- *Job Matching*
  Enable people to find suitable employment by establishing linkages between the Open Learning Platform and the Thailand Open Digital Platform, and by adding features that tie skill development to employer's payroll and security compensation.

- *Digital Skills for Vulnerable Groups*
  Promote the development of digital skills for the elderly and vulnerable groups so that they have sufficient skills for new ways of working in the digital era, in both digital and non–digital fields.
- *Social Digital Innovation*
  Support research, development and digital technology innovations that can be applied in solving social problems. Create platforms that meet the needs of communities, civil society, and social enterprises using digital services, such as learning services, health care services, and others.

**3. Create a digital–ready society**

- *Digital Society for All*
  Launch campaigns targeting children, youth, and the public to promote the proper, creative, and beneficial use of digital technology through digital media in order to resist harmful digital uses. Educate the public to better understand the importance of personal data protection as well as emerging technology issues.
- *White Hat Hacker Program*
  Prepare a new generation of hackers to locate vulnerable points and establish protections against cyber threats, to ensure that everyone can take advantage of digital technology with peace of mind and security. This includes development of preventive cyber–attacks guidelines for daily digital usage to ensure social stability and quality of life throughout the nation.




# Optimize use of digital infrastructure

In the next phase, the government will make digital infrastructure, digital access, and utilization widespread across all industries.

To further grow industry and digital innovation in the future, it is important to increase the efficiency of digital infrastructure through investment from both domestic and international investors. In order to address the digital manpower gap, it is necessary to establish a favorable ecosystem to attract digital workers and tech entrepreneurs from around the world to work on next-generation digital technologies and businesses.

***Strategic goals:***

- *Establish 3 new digital infrastructure projects*
- *Attract 3 leading digital corporates to invest in Thailand*

**Strategies:**

1. **Optimize digital infrastructure for all:** continue the development and utilization of existing infrastructure and develop new infrastructure to support development of the digital economy to make Thailand a leader in digital technology and innovation and to ensure digital sovereignty, through collaboration with the Ministry of Higher Education, Science, Research, and Innovation; Ministry of Finance; Ministry of Industry; Board of Investment; and National Broadcasting and Telecommunications Commission (NBTC).
2. **Enhance competitiveness of the Thai digital ecosystem:** expedite final approval of proposed legislation, rules, and announcements, and fast-track the review of legal impediments and recommended reforms in line with technological advances, through collaboration with the Ministry of Finance; Ministry of Industry; Ministry of Social Development and Human Security; Revenue Department; Ministry of Commerce; Board of Investment; National Broadcasting and Telecommunications Commission (NBTC); and the Digital Council of Thailand.

**Programs and Projects**

**1. Optimize digital infrastructure for everyone**

- *National Platforms*
  Develop cutting–edge, homegrown platforms that everyone can easily access and use, for the agricultural sector, business sector and daily life, in order to increase the efficiency and effectiveness of work and raise competitiveness. This will result in the formation of a network of technology development partners focusing on next–generation digital technologies, including blockchain, AI, and big data, among others.

**2. Develop a competitive national digital ecosystem**

- *Amendments of laws and regulations*
  Expedite amendment of outdated laws and regulations that impede development of the digital economy and society, such as the law on foreign business operations; the Civil and Commercial Code (convertible notes and vesting of stock options). Prioritize development of standards, regulations and quality control of products and services. Explore new laws and incentives that will promote future development of the digital economy and society.

# Collaborative Framework

# Driving Mechanisms

## The Digital Economy Promotion Master Plan Phase 2

**Cabinet**

**National level Committees**

- **National Digital Economy and Society Commission**
- **National Smart City Steering Committee**




**Digipreneurs & Digital Startups** (Accredited)

**Society**
**Communities**
**Traditional Economy**

**Smart Cities**
Livable Old Cities
New Modern Cities

**Reinforcement** → **Transformation** → **Showcase**

**Human Capital**

**Digital Literacy** → **Intermediate** → **Advance**

**Ecosystem**

Extend and optimize the use of digital infrastructure
Promote measures through capital market and money market mechanisms

**Provincial Digital Economy Promotion Plan** → **Provincial Developmen Plan** → **Integrated Provincial Administration Committee** → **Regional Development Policy Integration Committee**

### Budget

- Annual expenditure budget of government agencies
- Digital Economy and Society Development Fund
- Budget of Digital Economy Promotion Agency



## Policy-Level Mechanisms

The Digital Development for Economy and Society Act, B.E. 2560 (2017), outlines the policy-driven mechanisms of the Digital Economy Promotion Master Plan. Article 40 (1) mandates the Digital Economy Promotion Agency's Board of Commissioners with approving depa's Digital Economy Promotion Master Plan. Upon endorsement by the Board of Commissioners, depa is required to comply with the Master Plan in its entirety. If the execution falls under the jurisdiction of other agencies or requires collaboration from other agencies, the master plan must be submitted for approval to the National Digital Economy and Society Commission. Once accepted, depa is required to notify the relevant government authorities for their acknowledgement and execution [Section 42].

## Strategic Driving Mechanisms

### *Collaboration Framework*

Execution of strategies depends on a network of alliances between relevant ministries whose missions involve the private sector (domestic and foreign corporations and private sector associations), academic sectors (foreign educational institutions and local universities and vocational colleges, particularly in the region), and the public sector. depa will engage as a coordinating entity to drive strategic efforts and allocate resources to accomplish programs and initiatives in accordance with the Master Plan.

### *Regional Execution*

Regional execution relies on a network of government institutions, the private sector and local people. depa's regional branches are tasked with developing a provincial digital economy promotion plan to enhance each area's potential with digital technology, create opportunities, and drive the provincial digital economy and society toward the new economy, as well as utilizing technology advancement, digital innovation, and manpower with digital skills as essential tools for the successful execution of provincial development plans in every respect.

Provincial digital economy promotion plans will be proposed to the Integrated Provincial Administration Committee via the provincial development plan mechanism. The digital economy promotion plan for each area will serve as directives and guidelines for government offices/agencies, districts, local administrative organizations, private organizations, educational institutions, and civil society to integrate their operations and budget management in each area.

## *International Execution*

Strategic implementation of international initiatives (such as exporting digital products and services to foreign markets; expanding startups' markets to reach overseas; linking Thai SMEs to global value chains with digital technology; attracting technology companies, investors, digital nomads, digital students and expats into Thailand, etc.) relies on the government's existing international operation networks, which include the Ministry of Foreign Affairs; Ministry of Commerce; and the Board of Investment, among others.

To penetrate global markets more efficiently, it is vital to accelerate the linkages to digital investors and academic networks overseas.

## *Strategic Execution*

With the primary objective of "promoting" the digital economy, the master plan will take advantage of various government promotion tools, e.g., tax and non-tax incentives, money and capital market mechanisms, and others, such as public relations campaigns to raise awareness; full and partial financial subsidies; investment incentives; infrastructure and service platform development; amendment of laws and regulations; driving the plans in every region of the country; and establishment of institutes/operation centers.

## *Resource Allocation*

Strategies and goals from the Digital Economy Promotion Master Plan and the provincial digital economy promotion plans will be linked to Level 1 and Level 2 plans, and national policies and plans on digital development of the economy and society, as well as integrated into provincial development plans.

Channels for requesting budget allocation are as follows:

1) Annual expenditure budget or regular budget: Central, regional, and local government offices can request annual expenditure budgets to drive economic and social development strategies according to the master plan to achieve objectives. Before asking the government for an annual budget for smart city development projects, the Smart City Development Steering Committee must approve the area as an official smart city area.

2) Budget from the Digital Economy and Society Development Fund shall be spent on central and regional development of the digital economy and society in line with the Digital Economy Promotion Master Plan [Article 44] and in accordance with national policies and plans on digital economy and social development to drive the Digital Economy Promotion Master Plan and provincial digital economy promotion plans.

In addition, to mobilize the master plan development, government agencies may request budget from existing off-budget funding sources for relevant missions, such as the Competitiveness Enhancement Act of 2017 for elevating next-generation industries, Small and Medium Enterprises Promotion Fund (for SME development); Energy Conservation Promotion Fund (for Smart Cities – Energy); National Village and Urban Community Fund (for community development); Thai Media Fund (for media development); Educational Technology Development Fund (for public learning); and others.

3) depa's allocated annual budget for projects connected to the agency's mission or those related to the central or local development of digital economy and society, including budgets of government agencies, the private sector and educational institutions.

## *Monitoring and Evaluation Mechanisms*

Mechanisms for monitoring and evaluating execution of the Master Plan can be divided into 3 steps:

1) When depa's Board of Commissioners approves the Master Plan, depa shall convert the Master Plan into concrete action, both through its own organization and through programs and projects in cooperation with other agencies

having related missions. depa will report the results to its Board of Commissioners on a regular basis.

2) Execution of the Master Plan with support from other funds must be reported to the responsible fund's management committee, such as the Digital Economy and Society Development Fund Management Committee, which shall have the authority to monitor and evaluate operational performance of the implementation supported by the Digital Economy and Society Development Fund [Section 28 (5)].

3) In addition, the Minister of Digital Economy and Society has the authority to supervise the overall operations of the Digital Economy Promotion Agency, in accordance with its powers and responsibilities, and related laws and cabinet resolutions on the development of digital economy and society [Article 57].

4) To facilitate reporting on progress of activities and use of partners' budgets, depa may develop a performance monitoring system linked to the operating system of agencies responsible for driving the programs or projects specified in the Master Plan. Impacts will be assessed based on indicators using data from the 13th National Economic and Social Development Plan's action report. Outcomes will be assessed using survey results conducted by depa and social impacts using data from the 13th Plan. Using survey results based on strategies and budget allocations for gathering, processing, and analyzing data, the output of the Master Plan will be evaluated in order to stay up with the changing technological trends and new concerns affecting Thailand. Then, the Master Plan will be revised and submitted to the Digital Economy Promotion Agency's Board of Commissioners for consideration and approval and to the Digital Economy and Society Committee for consideration and approval for executing the plan in collaboration with other agencies as specified by laws.

DIGITAL ECONOMY PROMOTION AGENCY

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