

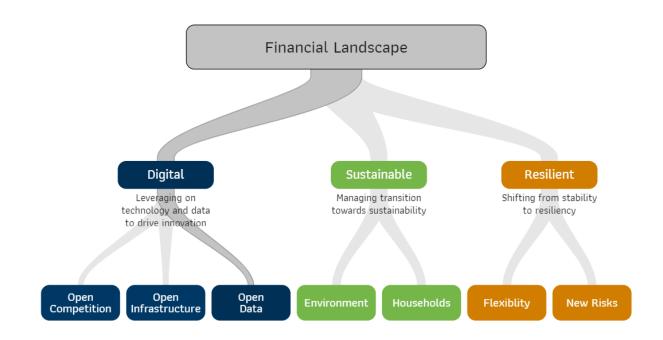
Open Data for Consumer Empowerment



BOT Consultation Paper on Open Data for Consumer Empowerment November 2023

I. Introduction

The Bank of Thailand (BOT) issued the Financial Landscape Consultation Paper on Repositioning Thailand's Financial Sector for a Sustainable Digital Economy. One of the key objectives of the digital financial landscape is to enable the financial sector to leverage on technology and data to develop services that better meet consumer needs and drive responsible innovation through three main principles: (1) Open Infrastructure, which allows service providers to access financial infrastructure at reasonable costs, (2) Open Data, which enables better utilization of data, and (3) Open Competition, which promotes both incumbents and new players to compete on a level playing field.



In accordance with these principles, one of the forthcoming policy directions is **Open Data for Consumer Empowerment**. The policy aims to build a mechanism that facilitate consumers to exercise their rights to conveniently and securely transfer their data stored at a service provider to another so that consumers can apply for and receive better services from any provider. Moreover, the mechanism will enable financial service providers to access and utilize data and key digital infrastructure with standardized processes and connections, which will reduce redundancy and costs. In turn, this will enable financial services to better serve not only the needs of consumers, but also those of service providers, and government agencies.

As is	To be						
1. Individual consumers and SMEs can exercise th	ne rights to send their data via a secure online						
channel to apply for and receive better financial services.							
1.1 Simpler loan application process with better financial access through risk-based pricing							
 Loan application usually requires a visit to a branch. Document validation and processing are time consuming and inefficient. Some service providers require documents, such as proof of income and bank statement, to be in a paper format and certified. Thin-file applicants, especially part-time employees and informal workers, face difficulty accessing formal credit or high interest rates. Although these customers may have financial history and timely payment records with other service providers, they are unable to conveniently 	 Loan applications can be done online. Applicants conveniently send their financial records such as proof of income, transactional records, as well as other financial or credit records that present their ability to pay from other sources to lenders. This includes tax filings, transactions history with various service providers that reflect good behavior and proof of income, and timely payments of utility bills. Loan approval process within minutes thanks to verified documents sent directly from sources. Lenders can readily utilize data from various sources and automatically input them into the 						
send such data to lenders.	system, hence reducing their operation time.Consumers have access to loans with costs and terms reflect their risks and ability to repay.						
1.2 Options comparison across multi-service prov	iders in one go made possible.						
Loan application processes are complex, time consuming, and can differ across providers. Different documents are required for each provider.	Consumers can give consent to Account Information Service Providers (AISP) to aggregate their data, including bank statements, debt repayment records, utility payment, and phone bill payment, can be sent to multiple service providers at once.						
1.3 Personal financial management can be done t	hrough a single mobile application with						
personalized finance and investment products.							
 Consumers who have bank or investment accounts (for instance, savings accounts, mutual funds, bonds, and life insurance, etc.) with multiple service providers need to aggregate information by themselves and manage these accounts on separate platforms. Personalized financial services are limited to large businesses and high-net-worth customers who hold high value portfolios with each service provider. 	 With AISP as a third-party provider, new products and services such as viewing and managing one's financial transactions on a single platform can be developed in a user-friendly manner. To take it further, the third-party provider may initiate payments from multiple accounts across multiple providers on the customer's behalf. Data are utilized to provide better products and personalized recommendations that match consumer needs and behavior, including small-ticket sized savings products, investment products suitable for first jobbers or consumers with low income. 						

As is	To be						
2. Financial service providers (both banks and non-banks) can access key digital infrastructure and leverage on technology and data to innovate and offer better services in a safe and secure manner.							
2.1 Enhancing efficiency and developing financial	products to better serve different groups of						
consumers.							
 Documents/data received from customers (some of which are in paper or image file format) must be verified and converted into a format that the system can process, preventing automation of the entire loan process. This high processing cost makes small loans unprofitable. Loan approval replies largely on financial history data and very little on data from other sources. This makes it difficult to offer loan products for self-employed and thin-file customers. 	 With the customer's consent, his/her data from multiple sources can be accessed and automatically entered into the system, resulting in lower operating costs. The customer's financial behavior and debt repayment ability can be assessed using a variety of data to design products that are suitable for each customer segment, such as small loans with payment terms that are suitable for the income and expenses of micro SMEs or those without regular income or long financial history. 						
2.2 Efficient access to key digital infrastructure a	and data enable financial service providers to						
 develop better services. Non-bank providers face challenges in connecting to key digital infrastructure due to entry barriers and high costs. Connecting to each infrastructure and exchanging data with various organizations involves different standards and processes. This requires time for development and results in redundant costs. 	 Both bank and non-bank service providers can access important digital infrastructure at a reasonable cost. Connecting to key digital infrastructure and exchanging data with different organizations is done under the same standard/process, which helps reducing costs. 						
3. The government has an efficient data manager	nent system which will lead to better usage of						
these data.							
Sending data from government agencies to other organizations (e.g. financial service providers) is costly due to the lack of standard, limiting the ability to provide data transfer services.	Government agencies can send data, based on consumer consent, to other organizations under a single standard, reducing costs and enabling wider range of data services available.						

The objective of this consultation paper is to inform and seek feedbacks on key policies where the BOT will initiate these mechanisms among financial service providers and prepare to connect with the ecosystem at the national level. Section II contains a summary of approaches in other countries. Section III describes strategic directions for developing the mechanisms in Thailand, and Section IV concludes expected outcomes and next steps.

II. Open Data for Consumer Empowerment in other countries

Many countries have developed the mechanisms for Open Data for Consumer Empowerment, such as the UK, Australia, South Korea, India, and Singapore, to support users in exercising their right to send their data to receive better services. Service providers can also improve their efficiency and competitiveness in developing digital financial services, resulting in new financial services that better meet the needs of users.

- Individual customers and SMEs can view their account information retrieved from multiple service providers and manage those on a single mobile application (i.e. consolidated account information). Furthermore, they can conveniently send these data to other providers of their choice.
- **Service providers** can access and utilize data, such as bank statements from multiple financial institutions, upon customer consent which are available in machine-readable format and can be processed directly, reducing operational time and costs.
- In addition, there are new services that build on the aggregated data, such as in the UK and South Korea, where customer data is used to calculate preliminary credit scores. This score is also sent to multiple lenders with customer consent. Furthermore, Payment Initiation Service Providers (PISP) allow customers to choose to transfer or pay from any accounts they have with various service providers through a single mobile application. Online stores or social media platforms also offer PISP services to customers to increase payment options.

There are two main approaches to drive the mechanisms to enable Open Data for Consumer Empowerment (details in Annex 1):

- 1. The government or regulatory agencies are the initiators, such as South Korea, which uses credit information laws to require financial institutions to provide data to other service providers with customer consent. Australia's Competition and Consumer Act 2010, and the UK's trade competition law (Enterprise Act) and payment services regulation provide ground in enabling customers to send their data from one service provider to another.
- 2. Central banks are the initiators, driving financial sector cooperation and expanding the mechanisms to other sectors. Central banks in Singapore and India have policies that encourage service providers under supervision (such as financial institutions, securities businesses, and insurance businesses) to put in place mechanisms that allow customers to send their data to other service providers digitally. Cooperation is also expanded to government agencies to open other types of data, such as Singapore's pension fund and India's retirement fund.

Most countries in either approach started by **issuing regulations** and/or **agreements with** entities that are responsible for sending and using public data. The goal is to promote the convenience and safety of digital channels for people to exercise their right to send data, and to enable the use of data for better services. In addition, **common standards for data transfers** are established and enforced, including registration and verification of service providers who will participate in the ecosystem to ensure compliance with the established common standards. This is to ensure that data exchange is secure and standardized, and to reduce costs and redundancy in standards development. Moreover, many countries have developed **common infrastructure** or shared services to enable service providers to efficiently connect or use services from key digital infrastructure. For example, digital ID infrastructure in India (Aadhaar) and Singapore (Singpass) have been used to verify and authenticate people's identities through digital channels, including e-KYC for opening bank accounts and exchanging financial data.

Box 1: India's journey to develop Open Data for Consumer Empowerment

In India, the central bank and financial regulatory agencies initiated the development of digital data exchange mechanisms under the consent of data. In 2016, financial regulatory agencies under the Financial Stability and Development Council (FSDC) agreed on principles, therefore allowing the Reserve Bank of India (RBI) to issue a Master Direction to promote open data ecosystem. This allows account aggregators to collect data with the consent of customers and expand cooperation to other financial institutions. In addition, service providers who want to participate in the ecosystem and have account information data, securities investment, insurance purchases, and retirement investment planning data, have developed mechanisms that allow customers to send their data to other service providers digitally. This is based on the principle that everyone should have access to their data stored in different organizations and have the right to manage and send their data to others.

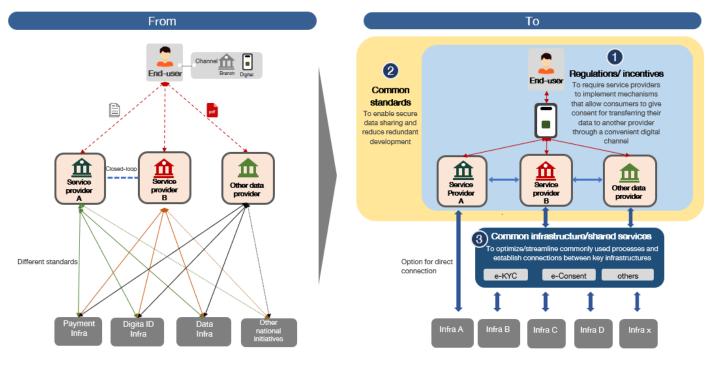
During 2017-2020, Sahamati was established to promote data exchange with customer consent among financial institutions and to supervise service providers who send and use data according to the central bank's established data exchange standards. In addition, a personal data protection committee was established at the national level to draft laws on digital personal data protection which would enhance the citizen's rights to utilize their own data.

Currently, Sahamati has 221 banks, 46 securities companies, 27 insurance companies, and 14 account aggregators participating, resulting in competition to develop better services for customers. Approximately two-thirds of all use cases involve using data to apply for loans. In addition, data is used for financial management. Recently, data requests were made 27 million times in October 2023.

The Digital Personal Data Protection Act, 2023, which came into effect in August 2023, covers the promotion of data exchange with customer consent for non-financial sectors. In addition, India has developed a public digital ID infrastructure (Aadhaar) to verify and authenticate people's identities before using digital channels with the same standard process.

III. Strategic directions to enable 'Open Data for Consumer Empowerment' in Thailand

In the initial phase, the BOT aims to build the mechanisms among financial service providers under BOT supervision under which is feasible within current legal framework, and prepare to further extend this ecosystem at the national level. (See Box 2: Building blocks to enable Open Data for Consumer Empowerment at the national level and Annex 2: BOT's preliminary implementation plans). Key policy directions are as follows:



- (1) Issuing regulations and providing incentives to ensure a mechanism where consumers able to exercise their rights¹ to send their own data from one service provider to another via digital channels.
 - (1.1) Financial service providers under BOT supervision shall put in place mechanisms that allow consumers to give consent to transfer their own data to another provider through a convenient and secure digital channel under good data governance. Service providers must adhere to established standards, and the pricing structure of the mechanism should not impede consumers from exercising their rights. The regulation will be implemented gradually, starting from data that promote greater access to financing and enhance financial management especially for retail consumers and SMEs, including account information data and payment transactions, which will enable service providers to design personalized savings or loan products.
 - (1.2) The BOT will engage with relevant government entities and private sector to enable data sharing between the financial sector under BOT supervision and other sectors. The aim is to enable financial service providers to leverage on more comprehensive data to understand each consumer better, thus improving financial

¹ According to the Personal Data Protection Act (PDPA)

access and services. The initial phase starts with data from government agencies that are digitally accessible by the data owners, including utility usage and bill payment and income reported from tax filing. This will be expanded to data from other sectors (e.g. investment, insurance, and cell phone usage and bill payment) in later phases.

(1.3) The BOT will consider allowing financial service providers under BOT supervision to provide data aggregation service based on customer consent (Account Information Service Provider: AISP). New services could include consolidated account information with data retrieved from various banks and displayed on a single mobile application and recommendations for savings and investment products that match the consumer's behavior. The BOT will regulate these activities in key areas such as IT security, data privacy and consumer protection.

Moreover, the BOT will consult with regulatory agencies involved in the possibility of having AISP that request data from other providers outside the supervision of the BOT, such as the capital market and insurance sectors, and to codevelop an oversight framework. In the future, the BOT will evaluate the potential benefits from allowing service providers to expand to financial service initiation on the customer's behalf, which will help facilitate applications and use services from various providers more conveniently, such as payment initiation service providers (PISP) in the UK.

- (2) Creating common standards for data sharing that will ensure efficiency and security. These common standards include application programming interface (API), data standard, and security standard which will reduce redundancy and development costs. Moreover, the data sharing mechanisms will include registration and oversight on service providers who participate in the ecosystem to ensure compliance with the established standards so that data sharing is secure and standardized. The development plan will start with standards that support use cases on financial access and financial management (e.g. standards for sharing savings account information), and will expand to other use cases in later phases.
- (3) Exploring use cases where a common infrastructure or shared service can be developed to streamline commonly used processes such as corporate e-KYC and onboarding and standardized processes to connect to key digital infrastructures such as payment systems. This aims to reduce redundancy costs of development, and allow various service providers to efficiently access key digital infrastructures and develop financial services that better meet the needs of users.

Strategic directions to enable "open data for consumer empowerment" Start with financial institutions and extend to the national level

R egulations & Incentives	Open data in the financial sector – Financial service providers supervised by the BOT are required to establish mechanisms that allow consumers to give consent for transferring their data to another provider through a convenient, cost-effective, and secure digital channel. This initiative will commence with account information data, fostering increased access to financing and improved financial management.
	Data sharing with other sectors including utility usage and bill payments, income reported through tax filings, securities investment, insurance, as well as cell phone usage and bill payments.
	Using data to develop new services – To consider allowing financial service providers under BOT supervision to offer new services that aggregate account information based on customer consent and initiate financial service on behalf of the customer to apply and use services more conveniently. Regulations will be put in place to ensure consumer protection, accompanied by discussion regarding the possibility of having service providers under other financial supervisory bodies such as the capital market and insurance to provide aggregation services.
2 Common standard	Common standards for data sharing – To establish common standards for digital data sharing among service providers along with an accreditation mechanism for providers adhering to these standards. Initial focus will be on standards conducive to use cases related to financial access and financial management (e.g. standards for sharing account information). Subsequent phases will encompass an extension to other use cases.
3 Common infrastructure/ shared services	Common infrastructure/shared service – To explore potential use cases where common infrastructure or shared services can be developed to optimize/streamline commonly used processes such as e-KYC and e-Consent.

Box 2: Building blocks to enable Open Data for Consumer Empowerment at the national level

In the long run, the BOT aims to see the development of this open data ecosystem at

national level to promote data sharing and use between different sectors for the benefit of people and businesses. Many countries have driven towards this goal by:

- (1) Issuing laws that allow data sharing with customer consent² and regulating businesses that aggregate data³ (which can also include data outside financial sectors) to ensure trust, data protection and customer protection.
- (2) Establishing national-level organizations that develop common standards for data sharing between different sectors.
- (3) Establishing central organizations that collect and store micro-level data from various sources (such as government agencies, financial institutions, and telecommunications) for service providers and organizations to use for statistical or in-depth analysis to develop better services that meet people's needs or to formulate more targeted strategies or policies.

² For example, Australia established the Competition and Consumer Act in 2010. The UK established the Competition and Markets Authority to promote fair competition and data sharing in financial sector and currently proposing the draft the Data Protection and Digital Information Bill.
³ E.g. Account Information Service Provider (AISP), data integration / exchange platform provider

IV. Expected outcome and next step

The development of the Open Data for Consumer Empowerment mechanism is an important factor in supporting Thailand's transition to a digital economy, including the development of digital finance in Thailand, in line with the key principles under the new financial landscape: Open Infrastructure, Open Data, and Open Competition. The development of this mechanism will allow financial service providers to access important infrastructure more conveniently and cost-effectively, and to benefit from data from various sources with customer consent, resulting in competition to develop better services that meet the needs of each customer group. In addition, customers can use their rights to send their data to service providers more conveniently, enabling them to choose and receive services that are more suitable for their needs, and helping to increase access to formal credit and at the costs that are in line with their risk (risk-based pricing).

To ensure that the policy direction to enable Open Data for Consumer Empowerment will be successfully implemented and serve the needs of consumers and the financial system, it requires (1) service users having knowledge, understanding, and digital skills, and service providers developing easy and secure mechanisms for their customers to transfer data through digital channels; (2) regulations, rules, and costs of data sharing that can incentivize service providers, service users, and related agencies to participate and sustain the mechanism; and (3) building confidence and security in using the mechanism.

The Bank of Thailand welcomes comments and suggestions on the policies on Open Data for Consumer Empowerment which can be submitted via BOT website or e-mail: <u>opendata-fsd@bot.or.th</u> by 31 December 2023. The BOT will incorporate these responses in designing policies and implementation plans accordingly.

Factors	UK	Australia	South Korea	India	Singapore
1. Regulations and i	-	Austratia	Court Norea	india	onigapore
1.1 Regulations and		y the government o	Initiated by the central bank		
agreements	The establishment of competition law (Enterprise Act) and payment services regulation requires financial institutions to disclose consumer's account details to AISP and PISP when the consumer gives consent.	The Competition and Consumer Act requires service providers in the specified sectors (financial, energy, and telecommunications) to disclose consumer's data to AISP when consent is given.	-	Entities which hold consumer financial data are encouraged to disclose information to Account Aggregators when consent is given.	Financial service providers and related entities are encouraged to exchange information via SGFinDex platform when they receive consent from the customers.
1.2 Data exchange between financial industry and other industries	 Started with financial data upon consumer consent (accounts information) In the process of expanding to other industries (utilities and telecommunications data) 	 Started with financial data upon consumer consent (accounts information) Expanded to utilities data and in the process of expanding to telecommunications data. 	 Started with financial and telecommunications data upon consumer consent (accounts information, loan, investment insurance, telecommunications) In the process of expanding to other types of data, such as education and health. 	Started among the financial industry and government entities when consent is given (accounts information, investment, insurance, pension fund, and tax).	Started with financial data and governments data (savings account, investment, insurance, and provident fund) upon customer consent.
providers with products that build on data sharing	AISP and PISP must apply to be registered or authorized by the Financial Conduct Authority (FCA)		AISP must be approved by Financial Services Commission (FSC)	Financial service providers under supervision, such as financial institutions, securities companies, insurance firms, and government entities.	Financial service providers voluntarily participate, such as commercial banks and insurance firms.
	Moreover, service providers are allowed to share data upon consumer consent without a centralized platform.			Various platform providers (AAs) who operate as a middleman to connect data consumers and providers as well as storing consumer consent.	GovTech, a government entity, operates as a common platform that connects data consumers and providers as well as storing consumer consent.
2. Common standard	Open Banking Limited (OBL), a private firm that establishes the standard, manages the directory, and governs both data sender and recipient.	 The Data Standards Body under the Department of the Treasury establishes the standard. Australian Competition and Consumer Commission (ACCC) manages the directory and governs both data sender and recipient. 	Korea Credit Information Services (KCIS), the country's central credit bureau, establishes common standards, manages the directory, and governs both the data sender and data recipient.	 The central bank establishes the standards. Sahamati was established as a not- for-profit private limited company to manage the directory and govern both the data sender and data recipient. 	GovTech establishes the standard
3. Common infrastructure or shared service in digital ID				Aadhaar acts as a common infrastructure	Singpass acts as a common infrastructure for individual users while Corppass is for juristic persons

Annex 2: BOT's preliminary implementation plans

The BOT's preliminary implementation plans on Open Data for Consumer Empowerment will cover three key components:

- 1. Issuing regulations and providing incentives to ensure a mechanism where consumers can exercise their rights⁴ to send their own data from one service provider to another via digital channels.
 - **1.1 Exercising the rights to transfer data from service providers under BOT supervision:** The BOT will consider issuing regulations to support the use of data owners' rights under the Personal Data Protection Act 2019 (PDPA) in sending their data to other service providers through digital channels that are convenient, secure, and in accordance with data governance. The BOT will start with data that promote greater access to financing and enhance financial management especially for retail customers and SMEs, including account information data and payment transactions and financial transaction data, such as payment transactions through various payment service providers.

The regulations aim to enable service users to conveniently exercise their rights to send data to other financial service providers and to ensure that the personal data of service users is appropriately protected, especially:

- Service providers must prepare data in machine-readable format and send data to other service providers when requested or with the consent of service users.
- The use of data must be in accordance with the purposes for which service users have given their consent, with good data governance and with appropriate data security standards. Service providers must strictly comply with common standards and agreements. Both data senders and receivers must be verified to ensure that they comply with common standards before participating in the ecosystem.
- Appropriate fee structures must be established to facilitate the exercise of service users' data transmission rights and promote efficient data transmission between them.

Please note that these criteria are the foundational requirements that service providers should be prepared to carry out to support the basic rights of service users. However, data senders may provide customer data to other data recipients outside the scope of these criteria, provided that they have obtained consent from customers and that the transmission or transfer of such data complies with relevant laws.

1.2 Exercising the rights to send data from other sectors: the BOT will enable service users to conveniently exercise their right to send data from other sectors to financial service providers, especially data that shows income, expenses, and digital footprint transactions. This will help financial service providers have comprehensive data for analyzing the behavior and needs of service users efficiently and promote better access to financial services. The BOT aims to

⁴ In accordance with the Personal Data Protection Act 2019 (PDPA)

implement the following plan:

In the first phase, the BOT will collaborate with the Digital Government Development Agency, government agencies, and state enterprises to develop a mechanism for data sharing with financial service providers with the consent of service users, or a channel for service users to conveniently send verified data from government agencies or state enterprises to financial service providers. This will start with basic data that are digitally accessible by the data owners, such as electricity and water bills and income from tax filing.

In the next phase, the BOT will collaborate with other regulatory agencies and service providers in other sectors that have important and ready-to-use data to discuss the mechanism for data sharing with the user's consent or a method for service users to exercise their data transmission rights. For example, data on mobile phone usage and payment, securities and investment holdings, and insurance policies.

1.3 The BOT will consider allowing new services where the customer data are aggregated from various sources based on the customer's consent. This will enable service providers to utilize the data that the customer chooses to send to them and offer services that better serve the customer.

In the first phase, the BOT will consider allowing service providers under BOT supervision to be an account information service provider (AISP) to develop new services. This includes displaying information that users have with multiple banks in a single mobile application and recommending savings/investment products that are suitable for the payment behavior of service users. Service providers will be supervised in important areas such as information security technology, customer protection, and data privacy. In addition, the BOT will discuss with relevant regulatory agencies the possibility of AISP aggregating data from providers outside the supervision of the BOT, such as the capital market sector and the insurance sector, and co-develop an oversight framework.

In the next phase, the BOT will consider the benefits and necessity of allowing service providers to expand into other financial transactions at the request of service users (financial service initiation), such as Payment Initiation Service Providers (PISP) in the UK and credit initiation and forwarding of loan proposals in Brazil.

2. Creating common standards for data sharing that ensures efficiency and security.

The BOT will collaborate with financial service providers and related agencies to establish common standards for digital data sharing and to prepare mechanisms for service users to exercise their data rights efficiently and with standardization. The BOT will start with financial data that will be shared between service providers under the criteria set out in the previous item and then expand to other use cases or new services that will benefit customers in the future. The following are the important operational guidelines:

- **2.1** <u>Establish a standard setting committee</u> to prioritize and oversee the development of necessary common standards in line with policy directions. The committee will consist of representatives from relevant sectors, including financial service providers (both data senders and receivers), regulatory agencies, and standard-setting organizations.
- 2.2 <u>Develop common standards for digital data sharing with customer consent,</u> <u>starting with financial data.</u> These standards will cover API standards, data standards, security standards for data transmission, and related practices and processes, such as consent management, customer experience design, and problem resolution.
- **2.3** <u>Establish a common directory</u> for registering data senders and receivers to ensure that data senders and receivers have systems that are ready and able to comply with common standards. This will enable verification and evaluation of compliance with the standards before participating in the ecosystem.
- 3. Exploring use cases where a common infrastructure or shared service can be developed to streamline commonly used processes to efficiently connect and utilize key digital infrastructures

The BOT will collaborate with relevant agencies (such as commercial banks, non-bank financial institutions, specialized financial institutions, and key infrastructure service providers) to **consider the benefits and necessity of having common infrastructure or shared services that enable service providers to connect or use services from key infrastructure in more efficiently. The BOT together with relevant agencies will prioritize the development of feasible common infrastructure/shared services that can reduce the cost of redundant development and support the development of financial services that better meet the needs of service users and are feasible and cost-effective**. For example, a platform that verifies the identity of corporate customers and allows them to access financial services through digital channels, which is a new use case that will benefit SMEs' access to financial services and is something that financial service providers and infrastructure service providers need to use together to provide digital financial services.

The BOT will consult with relevant agencies on implementation policy and necessary regulations during the first half of 2023.