

Unofficial Translation

This translation is for the convenience of those unfamiliar with the Thai language.
Please refer to the Thai text for the official version.

**Programmable Payment Testing Framework under
the Enhanced Regulatory Sandbox**

Distributed Ledger Technology (DLT) and Smart Contracts, with their ability to pre-define automated transaction conditions, hold significant potential for developing innovative and efficient payment and financial services. However, the application of such technologies could potentially impact the stability of the payment system and the overall financial stability.

Therefore, to promote innovation in payments while safeguarding the stability of the payment systems and overall financial stability, the Bank of Thailand (BOT) allows for the testing of "Programmable Payment" utilizing these technologies under the Enhanced Regulatory Sandbox. This aligns with the BOT's Regulatory Sandbox Guidelines for testing the application of technologies for financial innovation. The objective is to assess the benefits of such innovations alongside their potential risks. The BOT has established specific criteria and conditions for this testing under the Programmable Payment Testing Framework, as follows:

1. Definitions

"Programmable Payment" refers to payments and other transactions related to payments using electronic data units created on an electronic system or network. These payments have pre-defined automated transaction conditions, leveraging DLT, Smart Contracts, or similar technologies.

"Electronic Data Unit" refers to an electronic data unit created on an electronic system or network, intended to be used as a medium of exchange for goods, services, or other rights.

"Participant" refers to a financial institution, a company within a financial institution's group, a specialized financial institution, a non-financial institution under the BOT's supervision, or any other businesses approved to conduct Programmable Payment testing.

2. Scope of Programmable Payment Testing

(1) Payment and Settlement for goods or services with pre-defined automated transaction conditions.

(2) Escrow Services with pre-defined conditions for asset delivery based on contractual agreements or transaction terms.

(3) Asset Tokenization by creating Digital Representations of Rights and facilitating payments for or distribution of returns from such digital tokens with pre-defined automated transaction conditions.

(4) Others related to (1) - (3).

3. Criteria and Conditions for Programmable Payment Testing

(1) Electronic data units created for Programmable Payment testing must have a fixed value pegged to the Thai Baht (1 unit equals 1 Baht). The participant creating these units must implement a mechanism to maintain this fixed value by holding an equivalent amount of unencumbered Thai Baht in a segregated account at financial institutions, with a value not less than that of the electronic data units created at all times. This amount cannot be used for any other purpose and must be readily verifiable through transparent records upon request from the BOT.

(2) Participants must clearly define the redemption right of holders to convert electronic data units created for Programmable Payment back to Thai Baht at the predetermined fixed value. This redemption process must be facilitated under the principles, methods, and conditions outlined in the participant's Service Level Agreement. Other rights of holders must also be clearly defined.

(3) Participants must have risk management guidelines and technological contingency plans in place. This includes processes and methods for maintaining the security of IT systems, DLT, and Smart Contracts. A Business Continuity Plan (BCP) is required to ensure service continuity, along with an Information Technology Disaster Recovery Plan (IT-DRP) in case of IT system or DLT failure.

(4) Participants must implement Know Your Customer (KYC), Know Your Merchant (KYM), and Customer Due Diligence (CDD) processes. These processes must align with the standards for customer and merchant due diligence and be proportionate to the risk level of the customer or merchant, as stipulated by the Anti-Money Laundering Office.

(5) Participants must have a Client Suitability Assessment process in place. This process must include control measures to prevent vulnerable customers, as defined in the Bank of Thailand's Notification No. SorKorSor. 2/2563 on Market Conduct, from accessing the tested users.

(6) Participants must implement control measures to prevent the use of electronic data units created for Programmable Payment testing for purposes outside the testing scope. This includes:

(6.1) Using the units as a medium of exchange for goods and services outside the scope of Programmable Payment testing.

(6.2) Using the units in a manner that increases the risk of speculation on the Thai Baht or negatively impacts exchange rate stability and international capital flows.

(6.3) Listing the units for trading on a digital asset exchange.

(6.4) Using the units for investment or speculative purposes, such as staking.

(7) Test Participants must refrain from promoting Programmable Payment testing in a way that could mislead users or create confusion about the service.

4. Participation in Programmable Payment Testing

To participate in the Programmable Payment testing, the following procedures must be followed:

(1) Assess their readiness for application based on the "Programmable Payment Project Assessment Form" provided in the appendix.

(2) Consult with the BOT regarding the Programmable Payment use case to be developed for innovative and efficient payment and financial services before submitting the application between June 13th and September 13th, 2024.

The BOT will consider applications for Programmable Payment testing based on the applicant's business plan, technology readiness, and relevant risk management capabilities. The testing period will not exceed one year.

More information:



Payment Systems Policy and Financial Technology Department, Bank of Thailand


Telephone 0 2356 7068, 0 2283 5091

E-mail: EnhancedRegSandbox@bot.or.th

Attachment

Programmable Payment Project Assessment Form

1. Qualifications and Self-Declaration	
1) Applicants must be a juristic person registered in Thailand	A copy of the Certificate of Incorporation issued by the Department of Business Development
2) Applicants for the test can conduct the test with limited scope and business conditions.	<p>Sample endorsement letter can be referred to the attached form.</p>  <p>แบบหนังสือรับรองไม่มี ลักษณะเป็นการประกอบ</p>
3) Applicants must have a clean record of ethical conduct and no history or reason to suspect that they have engaged in unethical behavior or been involved in decisions that create conflicting interests.	<p>(Only candidates who are business operators who are not regulated by the Bank of Thailand or other regulatory agencies.) Sample endorsement letter can be referred to the attached form.</p>  <p>แบบหนังสือรับรอง คุณสมบัตื.docx</p>

4) Applicants are eligible to proceed according to the criteria and conditions for testing Programmable Payment	// sample authorization letter can be referred to the attached form.  แบบหนังสือรับรอง เงื่อนไขสำหรับการทดสอบ
2. Applicant Information	
1) Name of the applicant company	
2) License under the supervision of the Bank of Thailand held by the applicant. (If applicable)	
3) Licenses under the supervision of other regulatory bodies held by the applicant. (If applicable)	
4) Additional applicant information	Additional company information, including an overview of the customer base and a concise summary of past experience, as well as certification documents for the appointment of a director or an authorized manager. The certification should be signed by the director or authorized manager.
5) Name of Partner Company (If applicable)	

3. Programmable Payment Information	
1) Number of electronic data units in circulation	xx Units (Baht)
2) Reserves	<input type="checkbox"/> Deposits in the same currency as the units of Programmable Payment at Institute.
3) Reserves auditing	How to manage and check the reserves, such as Audit or Self-checked Balance
4) Redemption rights	Number of days to complete the process
4. Scope of Programmable Payment Testing	
1) Scope of Programmable Payment Testing and Business Process	<input type="checkbox"/> Payment and Settlement <input type="checkbox"/> Escrow service <input type="checkbox"/> The use of electronic data units as a medium of exchange for transactions related to asset tokenization or the creation of an electronic data unit that represents asset rights (Digital Representation of Rights). <input type="checkbox"/> Other Scopes(Please specify).....
2) Project Details	
3) Benefits of the project	
4) Use Case Developers	

5. Related Technologies Information	
1) Decentralized ledger technology (DLT)	Provide the name of the DLT and the details of the underlying technology of the DLT, such as the DLT platform or Software Development used in development.
2) DLT networks	private or public DLT and can be accessed by permissioned or permissionless with additional details such as details/number of validator nodes, consensus format in use, etc.
3) High-level System Diagram	The structure diagram details the DLT system and network , e-wallets, smart contracts, as well as the connection points to other related systems.
4) Interoperable Design	The Interoperable design diagram specifies the details of the linked systems and the methods that are expected to be used, such as linking with traditional systems and other DLT networks, etc.
5) Developer and maintainer of DLT networks	Developed by the company itself or using an external service provider. Related standards, including accreditation from international organizations/agencies related to the setting of international standards. Please provide details.
6) Smart Contracts Audit	Developed by the company itself or using an external service provider. Related standards, including accreditation from international organizations/agencies related to the setting of international standards. Please provide details.
6. Risk Management and Risk Management Plan	
1) Information	i.e., Data Privacy Plan, Cyber Threat Response
2) Operation	Relevant operational risk management plans
3) Legal Compliance	Consumer Protection Plan/Legal Compliance such as: <ul style="list-style-type: none"> ● Client suitability assessment process ● Complaint receiving process

4) DLT system and network	Overall security maintenance plan, and network governance covering network nodes and on-chain/off-chain access points.												
5) E-wallets	Overall security maintenance plan												
6) Smart Contracts of Electronic Data Units	The plan to maintain security and supervise that electronic data units can only be used within a specified scope, such as guidelines for whitelisting etc.												
7) AML/CFT and Legal Compliance	Identify risks and prevention guidelines, risks related to laws and regulations, including the KYC/KYM/CDD process in accordance with identity verification standards.												
8) Other related work systems	i.e., The overall security maintenance plan covers on-chain/off-chain access points , as well as support plans and system recovery plans in the case of systems and networks. DLT is not available.												
7. Testing framework, key success indicators, and exit/transition strategy													
1) Testing framework and key success indicators	<p>Specify the testing framework , with at least the following details:</p> <table border="1"> <thead> <tr> <th>Subject</th> <th>Details</th> </tr> </thead> <tbody> <tr> <td>1. Framework</td> <td>Identify the information as follows</td> </tr> <tr> <td>1) Transaction Characteristics</td> <td></td> </tr> <tr> <td>2) Target Users</td> <td></td> </tr> <tr> <td>4) Transaction Volume</td> <td></td> </tr> <tr> <td>5) Test Period</td> <td></td> </tr> </tbody> </table>	Subject	Details	1. Framework	Identify the information as follows	1) Transaction Characteristics		2) Target Users		4) Transaction Volume		5) Test Period	
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	<p>2. Key Success Indicators</p>	<p>Examples of Key Success Indicators are as follows:</p>	
		<p>Indications</p>	<p>level</p>
		<p>1. Business - Success rate of more than 90% per month</p>	
		<p>2. Technology - IT system availability is at a high level, more than 90% per month.</p>	
		<p>3. Consumer Protection - The number of complaints, such as inaccurate information.</p>	
<p>2) Exit/Transition Strategy</p>	<p>(1) Successful case</p> <p>(2) Unsuccessful case.....</p>		