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Sandbox to Society: Fostering Innovation in Southeast Asia



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Executive Summary

Regulatory sandboxes are a useful tool for policymakers in the digital economy.

It is an instrument that enables regulators to foster innovation in a safe and responsible way, while creating a safe space for closer dialogue between regulators and businesses in various industries.

Sandbox initiatives have seen increasing adoption in Southeast Asia.

Since 2016, with more than half of the sandboxes in the region launching in 2020 or later. In line with global trends, sandboxes in the region have gained the most traction in the financial technology sector.

Southeast Asia's implementation of sandbox initiatives vary in administration and implementation.

This reflects the intention of regulators to test technologies and learn of potential policies to mitigate the risks emerging technologies may bring.

Some sandboxes in Southeast Asia reflect each country's unique context and national priorities.

For example, Singapore's privacy-enhancing technologies (PET) and generative AI sandboxes show the country's focus on emerging technologies. The Philippines implements an agricultural insurance sandbox to protect its farmers, whereas Malaysia operates a drone sandbox to further position the country as the drone hub of Southeast Asia.

Executive Summary

➤ Sandboxes in Southeast Asia tend to be innovation-focused rather than policy-focused.

Almost 90% of the sandboxes in the region are focused on product development. Currently, only a few include policies or regulations as a desired outcome.

➤ Regulators generally take an advisory approach in sandboxes rather than an adaptive or anticipatory one.

The majority of sandboxes (64%) are considered advisory in approach as it was designed to test the viability of new products and business models, and to clarify regulatory grey areas so that businesses can comply with existing regulations.

➤ Moving forward, regulators and the private sector can collaborate together to improve the implementation of sandboxes in the region.

For regulators, key considerations include setting clear sandbox guidelines and frameworks, establishing a platform for sharing regulatory learnings, adopting a more anticipatory approach, creating more cross-sectoral sandboxes and coordinating sandbox corridors for cross-border testing. Meanwhile, the private sector should consider being more open to sharing data and expertise to regulators, proactively contribute feedback to improve sandbox administration, and offer dedicated teams to ensure internal alignment and effective participation in sandboxes.

Innovation in policy development can be effective in responding to the needs of the digital economy for Southeast Asia

Types of policy development approaches gaining in prominence:

Outcome-based / Principle-based regulation

Outcomes /
principle-driven vs
prescriptive in the “how”

Co-regulation

Collaborative
development between
regulators and industry
stakeholders

Dynamic regulation

Use of real-time data and
analytics to monitor and
adjust regulatory
frameworks / policies
as needed

Regulatory Sandbox

Testing effectiveness of
regulatory approaches

Testing of impact of new
products and services

Sandbox 101: What are regulatory sandboxes?

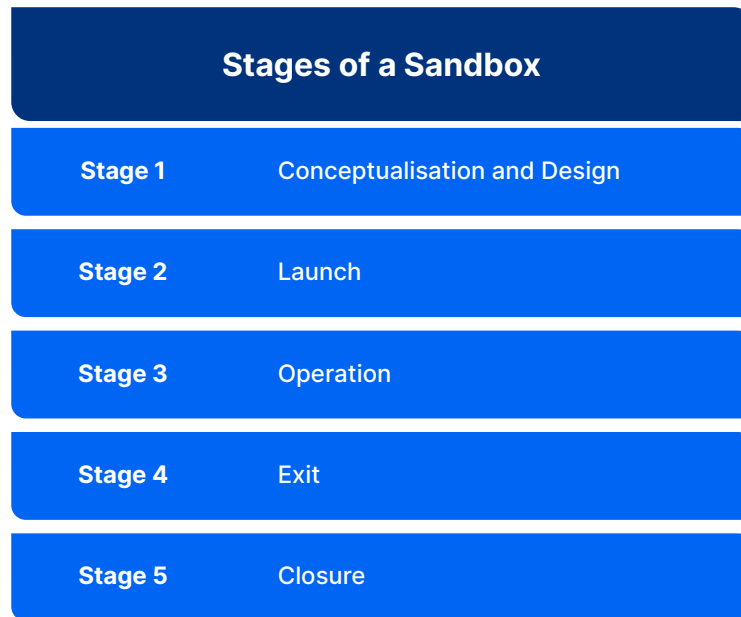
- ➔ Sandboxes are regulatory frameworks or environments that allow:
- live **testing** of innovative technologies and business models
 - in a **controlled** and **time-bound** manner
 - while **mitigating risks** and **unintended consequences** before adoption
 - and facilitate **regulatory learning**



Sandboxes implementation typically covers five (5) stages

In various stages of the sandbox process, governments and businesses work together to test new technologies / policies.

The Sandbox Process



Sandboxes have inherent benefits...



For businesses

Fast track **innovative ideas**

Access to finance for participating firms



For regulators

Regulatory learning through open engagement



For consumers

Accelerate trusted **technology adoption**

...but also have risks involved.



For businesses

Uneven playing field for firms inside and outside the sandbox



For regulators

Resource intensive for operations and monitoring



For consumers

Regulatory arbitrage which may lower regulatory standards and compromise consumer protection

Sandbox practices vary depending on focus and approach

Focus

➤ Innovation

Innovation-focused sandboxes aim to encourage innovation by lowering the cost of entering the regulated marketplace, and allowing businesses to test the viability of new products and business models.

➤ Policy

Policy-focused sandboxes use the sandbox process to evaluate specific regulations or policies which may be impeding innovation, with an interest in potentially amending existing regulations or introducing new regulations.

Sandbox practices vary depending on focus and approach

Approach

➤ Advisory

Sandboxes with an advisory approach aim to reduce regulatory frictions and attract new businesses, by helping innovative new products and services adhere to existing regulations.

➤ Adaptive

Sandboxes with an adaptive approach aim to first understand the value of the new digital products or services and works to adapt both the innovation and/or existing regulations to bring the product or service to market. Unlike the advisory approach, if regulatory barriers are identified, changes to the existing regulations can be explored, generally on a case-by-case basis.

➤ Anticipatory

Sandboxes with an anticipatory approach aim to better understand the potential impact of an emerging technology and what the corresponding regulatory needs might be. Anticipatory regulatory approaches can be characterised by six key principles: inclusive and collaborative, future-facing, proactive, iterative, outcomes-based and experimental.

Mapping sandboxes in Southeast Asia....

39

total sandbox
initiatives in SEA-6

10

total sectors with
sandbox initiatives

- Fintech
- Healthcare
- Transportation
- Drones
- Agriculture
- Emerging Tech
- Energy
- Environment
- Built environment
- Edutech

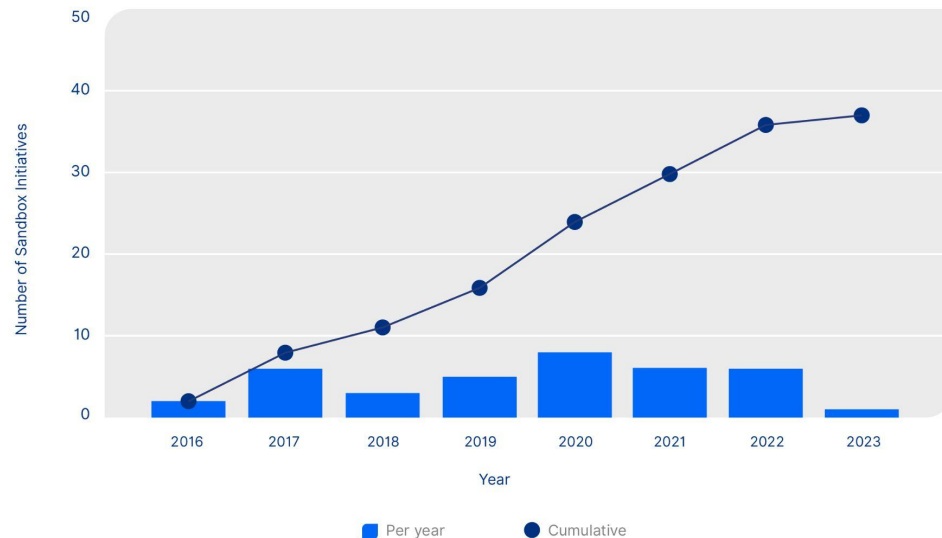
Majority are still operational



Source: Tech for Good Institute, 2023

Sandbox is a relatively new practice in Southeast Asia, with implementation increasing over the last few years

➔ More than half of sandboxes started only in 2020

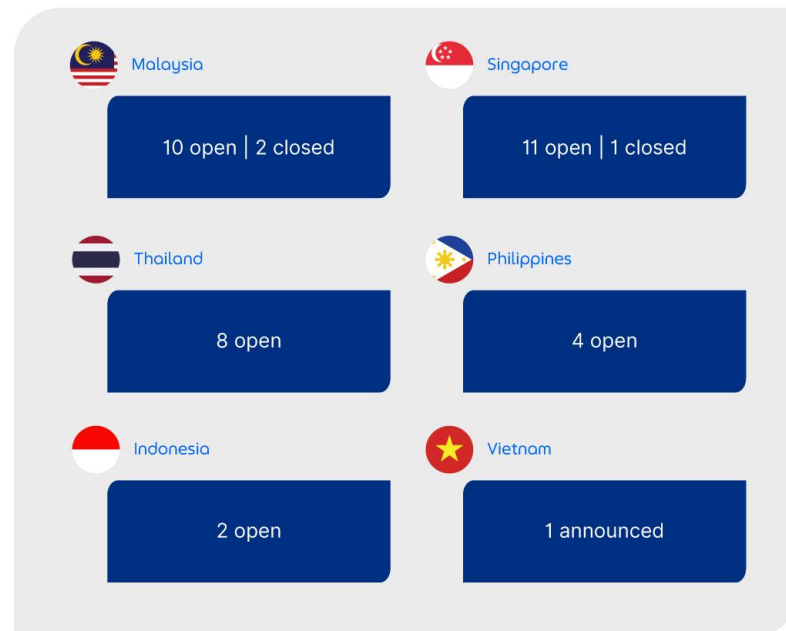


Source: Tech for Good Institute, 2023

SEA-6 economies have sandboxes or are planning to have one

- ➔ Malaysia and Singapore lead the region in number of sandboxes
- ➔ Vietnam recently announced a sandbox, but it is currently in draft state

Status of Sandboxes per country

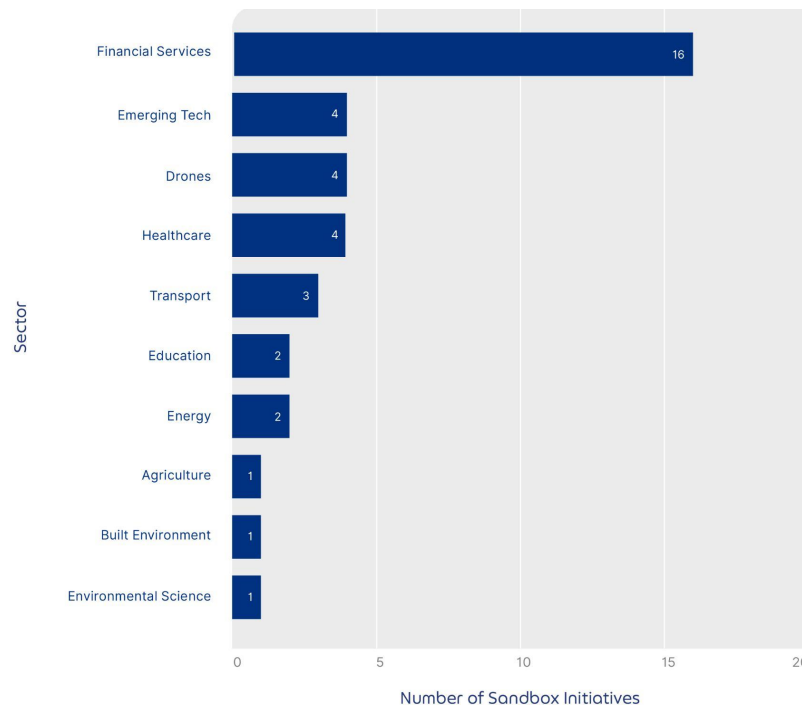


Source: Tech for Good Institute, 2023

Sandboxes in SEA-6 mainly focus on fintech and vary in implementation

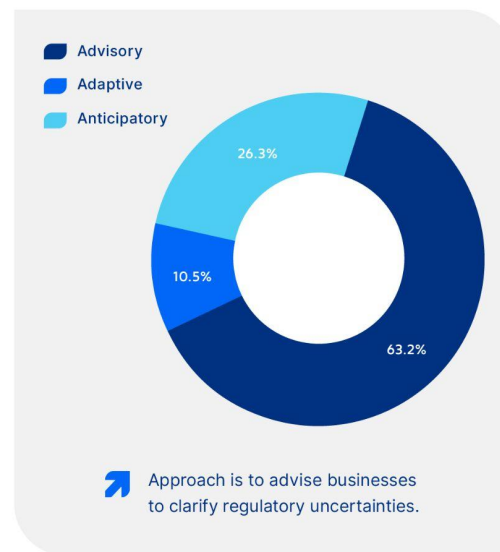
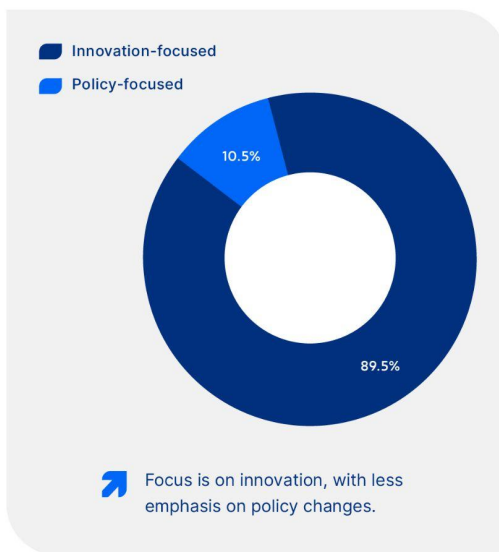
- More than one-third of the sandboxes are in financial services.
- Sandboxes in SEA-6 vary in implementation and administration.
- Sandboxing frameworks vary in clarity and transparency.

Sandboxes per sector



Source: Tech for Good Institute and NUS Centre for Governance and Sustainability, 2023

Most of the sandboxes in SEA-6 are innovation-focused and regulators tend to take an advisory approach



Source: Tech for Good Institute, 2023

Sandboxes in Southeast Asia reflect country-specific contexts and are often linked to national strategies



Insurance Tech

The Philippines has an agricultural insurance sandbox aimed at increasing insurance take up rates amongst farmers, reflecting the importance of the agricultural sector and recognising the disaster-prone nature of the country.



Drone Technology

Malaysia has a sustained focus on drone and robotics sandboxes, in line with the Malaysian Drone Technology Action Plan 2022-2030 (MDTAP30), the national agenda to support the development of the drone ecosystem.



Emerging Technologies

Singapore launched its privacy-enhancing technology (PET) sandbox in 2022, demonstrating the government's commitment to data protection while cementing its position as a regional technology hub. Additionally, Singapore launched the Generative AI Evaluation Sandbox for Trusted AI in October 2023. This reflects the rising adoption of generative AI and the intention of Singapore's regulators to have a standard approach in assessing the technology.

Moving from sandbox to society



Exited sandbox in 2019

MoneyMatch is a fintech startup, enabling cross-border international payments and remittances. In 2019, it became the first graduate of Bank Negara Malaysia's regulatory sandbox, having pioneered the use of eKYC solutions in the cross-border payments space.



Exited sandbox in 2021

Doctor Anywhere is a telehealth platform that provides video consultations with medical doctors and healthcare professionals through a mobile app. Since participating in MOH's LEAP from 2018 to 2021, Doctor Anywhere has seen exceptional success and has firmly established itself as a regional leader in healthcare.



Exited sandbox in 2022

NestiFly is Thailand's first licensed P2P lending platform. It exited from the Bank of Thailand's regulatory sandbox and was issued its business licence on 22 April 2022. NestiFly is an alternative credit service provider with low-risk collateral securities, filling a gap in the market for the financially underserved who face difficulty in accessing finance from mainstream banks.




Key considerations for sandbox development in Southeast Asia

For Regulators

-  **First, creating clear and transparent sandbox guidelines, as well as explicit articulation of the sandbox's objectives from the outset, can help set regulators and businesses up for success.** These guidelines and objectives should be made publicly available in the interests of transparency, for instance, on the regulator's website.
-  **Second, ensuring greater transparency and sharing of lessons learned through sandboxes is crucial to further foster regulatory learning.** As sandbox programmes are relatively nascent in the region, there is much to gain by sharing lessons, insights and best practices to enable sandbox administrators and participants to learn from others' mistakes.
-  **Third, an anticipatory approach should be taken when establishing sandboxes for emerging technologies.** While many sandboxes in the region have taken an advisory approach, an anticipatory approach may be more suitable for emerging technologies where the risks and opportunities surrounding the technology are not yet known.
-  **Fourth, regulators can consider taking a multi-sectoral approach to sandbox implementation, facilitating innovation in digital technologies as a horizontal cut across industries.** Such an approach enables sharing knowledge among numerous regulatory bodies and more efficient regulatory processes for businesses to approach a single point of contact instead of having to search for the correct regulator for their business.
-  **Finally, there is an opportunity for regulators to coordinate with regulators from other jurisdictions to implement "sandbox corridors".** This would support a firm's cross-border movement and operations whilst encouraging regulator cooperation and reducing regulatory arbitrage. This is particularly important in the context of the increasingly borderless digital economy.

Key considerations for sandbox development in Southeast Asia

For Firms

-  **The private sector should have a collaborative attitude and be open to sharing their tech and data in order to inform policymakers, extend knowledge, skills and resources.** Many areas of the digital economy are not zero-sum games - there is often plenty of room for several winners. Without collaboration, businesses risk delaying breakthrough discoveries, overlooking new markets and missing out on cost savings by duplicating efforts.
-  **Participating businesses have a responsibility to actively contribute their learnings from the sandbox process to such platforms.** As much as regulators can facilitate knowledge sharing and provide their own insights and learnings, it is equally important to get the perspective of participating companies in order to provide a holistic view of the entire process.
-  **To facilitate sandbox participation, internal coordination within companies may be necessary, particularly for larger companies.** This could entail the formation of a dedicated team with multiple stakeholders from business, product, legal and public policy teams, to ensure internal alignment for more efficient and effective participation in the sandbox.

Thank You