

Understanding the importance of regulatory sandbox environments and encouraging their adoption



AFRICAN DEVELOPMENT BANK GROUP
GROUPE DE LA BANQUE AFRICAINE
DE DEVELOPPEMENT

Table of Contents

1	Introduction	5
a.	Overview	6
b.	Aims of the report	7
2	What are regulatory sandboxes and why are they important?	8
a.	Background	9
b.	Definitions	9
c.	Characteristics	10
d.	The importance of regulatory sandboxes	11
e.	Alternative options	12
3	Expected benefits and identified concerns	14
a.	Expected benefits	15
b.	Identified concerns	17
4	Sandbox creation and design	19
a.	Objectives and motivations	20
b.	Consultative approach to sandbox creation	21
c.	Iterative approach to design and build	21
5	Sandbox governance and regulatory authority	25
a.	Sandbox governance	26
b.	How authority is exercised	28
6	Global examples and lessons learned	33
a.	Who can apply to participate in the sandbox	34
b.	How and when do participants apply to utilise the regulatory sandbox?	35
c.	What are the evaluation criteria used to determine eligibility?	36
d.	Duration of and transition from the regulatory sandbox	38
7	International sandboxes: Privacy concerns and cross border data flows	41
a.	Privacy concerns with data flows	42
b.	Case study: ASEAN Regulatory Pilot Space	43
8	Encouraging the creation of sandboxes	48
a.	Clear objectives and feasibility assessment	49
b.	Practicalities of sandbox hosting	50
c.	Demonstrable market readiness	53
d.	Overcoming identified obstacles	54
e.	Examples of participants in established regulatory sandboxes	54

9	Accelerating the adoption of sandboxes	57
a.	Stakeholder engagement and awareness building	58
b.	Knowledge sharing and capacity building	58
c.	The role of regional bodies and industry bodies	59
10	Tangible next steps	62
a.	Capacity building	63
b.	Knowledge sharing	63
c.	External support	63

Table of Boxes

Box 1	UK Financial Conduct Authority sandbox	6
Box 2	Examples of how participant companies benefit from FinTech sandboxes	16
Box 3	Example of a consultative approach for establishing a regulatory sandbox	22
Box 4	Example of an iterative approach to regulatory sandbox application processes	23
Box 5	How authority is exercised – UK FCA regulatory sandbox tools	30
Box 6	Eligibility criteria for applying to the UK FCA regulatory sandbox	37
Box 7	UK Information Commissioner’s Office (ICO) sandbox exit procedures	39
Box 8	Regulatory sandbox feasibility assessment	50
Box 9	Case study: The evolution and development of the Regulatory Sandbox Licence of the Economic Development Board, Mauritius	51
Box 10	Practicalities of setting up a regulatory sandbox	53
Box 11	Future regulatory frameworks and sandboxes: A European strategy for data	60



1. Introduction

a. Overview

A regulatory sandbox is a virtual concept, a testing ground set up and administered by a regulatory authority, whereby participants can apply to test their innovative products and services in a controlled environment for a defined purpose and a predefined amount of time.

The demand for regulatory sandboxes was initially driven by the growth and impact of big data on technological innovations, and the increasing complexity of such innovations. The Covid-19 pandemic has accelerated these developments, creating further demand for flexibility in regulation and data privacy policy.¹

The objectives of a regulatory sandbox can be nuanced to focus on promoting innovation, encouraging competition, driving financial inclusion or undertaking policy prototyping. All of these objectives, to some

extent, enable and encourage economic activity, as well as potential inward investment to the economy. In addition, the regulatory requirements of compliance can be burdensome for companies, especially small and medium enterprises (SMEs) and can hamper growth. In order to promote the development of innovations, sandbox environments can be used to grant regulatory waivers or provide modifications to existing rules for specific products or services that meet pre-defined criteria.

A sandbox approach should enable administrators to consider and try different regulatory and policy approaches to address their legitimate cybersecurity concerns in a way that will not delay the development of a digital society. For this to happen, regulators must be aware of potential impacts on data privacy and consumer protection.

Box 1: UK Financial Conduct Authority sandbox

The UK Financial Conduct Authority sandbox seeks to provide firms with:

- The ability to test products and services in a controlled environment
- Reduce the time-to-market potentially at a lower cost
- Support in identifying appropriate consumer protection safeguards to build into new products and services
- Provide better access to investment finance

Source: UK Financial Conduct Authority: <https://www.fca.org.uk/firms/innovation/regulatory-sandbox>

¹ Reg4Covid : <https://reg4covid.itu.int/>

b. Aims of the report

The primary aim of this report is to promote knowledge-sharing and dissemination with the Bank's regional member countries (RMCs) regarding the workings and use of regulatory sandboxes in Africa.

This report will provide guidance to encourage the creation of regulatory sandbox environments and examine how their adoption can be accelerated by motivating stakeholders, both NRAs and the private sector, to participate actively in them.

This report covers how a regulatory sandbox environment works, identifying the stakeholders and key elements. It highlights, using case studies and examples drawn from different countries and economic sectors, the benefits, problems and solutions in the creation, utilisation and governance of regulatory sandboxing environments.

The report draws on existing findings in the field, supplementing that knowledge with primary research. Firstly, from ICT National Regulatory Authorities (NRAs) within Africa that have expressed an interest in regulatory sandbox environments, secondly, from regulators in other sectors (primarily FinTech) that already have sandbox environments in process and thirdly from potential sandbox participants from within the digital economy. The research was undertaken by way of a survey supported by targeted interviews and the responses contribute significantly to this report.



2. What are regulatory sandboxes and why are they important?

a. Background

Regulatory sandboxes are a relatively new approach to the regulatory and supervisory treatment of innovative products and services. The first regulatory sandbox was launched in 2015 by the UK Financial Conduct Authority (FCA) when it coined the term “regulatory sandbox”. They have since generated great interest from regulators and innovators around the world.

Since 2015 the concept has been developed in more than 25 countries from Abu Dhabi in the UAE to Sierra Leone.² Many other countries are in one of the various stages of development: consultation, announcement, in progress, draft bill, agreement to implement. Sandbox environments have been adopted by many sectors, ranging from FinTech to Health, Transport, Energy and ICT.

b. Definitions

As this is a developing field across many sectors and technologies, there are many definitions of regulatory sandboxes that touch on different important aspects. Two of the more comprehensive definitions are:

Firstly:

- a regulatory approach, typically summarized in a document and published, that allows live, time-bound testing of innovations under a regulator’s oversight. New financial products, technologies, and business models can

be tested under a set of rules, supervision requirements, and appropriate safeguards.

- a conducive and contained space where incumbents and challengers experiment with innovations at the edge or even outside the existing regulatory framework.
- A regulatory sandbox brings the cost of innovation down, reduces barriers to entry, and allows regulators to collect important insights before deciding if further regulatory action is necessary.
- A successful test may result in several outcomes, including full-fledged or tailored authorization of the innovation, changes in regulation, or a cease-and-desist order.
- The concept of the regulatory sandbox keeps evolving into distinct models determined by several factors. A significant common feature is that a regulatory sandbox facilitates the necessary dialogue between market participants and regulators to inform regulatory actions that strike the right balance between facilitating innovation and mitigating (new) risks. The key differences between models concern eligibility criteria, safeguards and testing requirements, organizational structure, and operational details.³ (Emphases added)

² Source: DFS Observatory (Columbia Business School)

³ United Nations Secretary-General’s Special Advocate for Inclusive Finance and Development (UNSGSA)

Secondly:

- A safe playground in which to experiment, collect experiences, and play without having to face the strict rules of the real world.
- The private sector can innovate without worrying about fines or liability; the regulatory agency can test regulations to see what works before going through the long process of creating new rules; and consumers have access to these services in a controlled environment.
- The goal is to relax or change existing regulation in a controlled and evaluated space to run real-world experiments. These experiences can be collected and inform evidence-based regulatory schemes.
- Sandboxes are used as an alternative to regulation based on speculation about what impacts could result – and what risks and harms can emerge – from changing technologies or changing policies.⁴ (Emphases added)

However, no single definition covers all of the following elements, which are collectively useful when wrestling with the concept:

- A framework organised and administered under a regulator's oversight ...
- to enhance innovation and....
- to enable testing....

- for products, services and business models....
- waiving, exempting or relaxing the usual regulatory supervision...
- with appropriate safeguards....
- including for consumer protection....
- within a contained “safe space” environment, with defined time and space...
- facilitating the necessary dialogue between market participants and regulators...
- to inform evidence based regulatory policy changes.

These elements form the essential characteristics of a regulatory sandbox environment.

c. Characteristics

Many regulatory sandbox environments share two standard features that directly benefit consumers.

Firstly, that firms applying to participate within the sandbox need to demonstrate that their product or service is a genuine innovation. This genuine innovation can be established by the use of a new technology, or the innovative use of an existing technology. In some cases, a step change in scale may meet this criterion of genuine innovation.⁵

⁴ Medium.com

⁵ Attrey, A., M Leshner and C. Lomax (2020), “The role of sandboxes in promoting flexibility and innovation in the digital age” OECD Going Digital Toolkit

Secondly, the applicant will need to demonstrate that the proposed product or service meets a distinctly identifiable consumer benefit. This may be through improved quality, increased competition or better pricing.

d. The importance of regulatory sandboxes

Why are regulatory sandboxes important? Why do we need them? What purpose do they serve?

From a regulator's point of view, perhaps the overarching importance of regulatory sandboxes is that they allow regulators to collect important insights to inform evidence-based regulation.

From the participant's point of view, especially if the participant is an entrepreneur or SME, the regulatory requirements to achieve full compliance with the existing rules can be onerous and can stifle innovation and hamper growth.

From the consumer's point of view, any framework or tool that can encourage the introduction of new products or services, promote competition and drive prices down would, presumably, be welcomed.

Digital technologies and big data have disrupted entire industries. By their very nature, these products and services differ

significantly to those in traditional markets causing friction with existing regulatory frameworks which were not designed to meet the needs of these products and services.

Regulatory sandboxes allow policymakers to experiment with the application and enforcement of specific regulations, and this flexibility will enable the promotion of innovation. SMEs avoid being overwhelmed by regulatory requirements and can often obtain a deeper understanding of the supervisory expectations by testing their products and services in a monitored space.

In return, regulators have the chance to gain insight into the advantages and risks of newly developing technologies, putting them in a better position to judge the viability of innovative products and services. The lessons learned from experiences throughout the testing phase can show the need for new supervisory rules or indicate gaps in the protection of customers, enabling the authorities to develop appropriate solutions.

Furthermore, the chance to adjust the product or service before entering the market will reduce the costs for firms, and thus potentially provide benefits to consumers through reduced prices.

The importance and relevance of regulatory sandboxes has increased during the ongoing pandemic. Covid-19 has expanded the use of cloud storage of various services to ensure business continuity, and brought new

demands on data collection, use, and sharing – all without sufficient time to implement appropriate regulatory frameworks.

Testing is needed to find best practice approaches to ensure a level playing field between global platforms and local companies (such as telecom providers and financial institutions), without compromising consumer protection. Regulatory sandboxes enable this to be achieved through “collaborative regulation”.⁶

Finally, international sandboxes can encourage cross-border data flows within regions or sub-regions, can promote trade, and can be a stepping-stone to a formal mechanism for cross-border data flows. The application of sandboxes to address data regulatory issues has been adopted, for example, by ASEAN with its Regulatory Pilot Space approach.⁷

e. Alternative Options

While the arguments for creating and operating regulatory sandboxes are compelling, they are only one of several possible measures to promote innovation available to regulators, who are often changing regulations and experimenting in other ways. So, alternative approaches

should be considered.

Policy makers globally have recognised the regulatory challenges associated with digital transformation and have responded in a variety of ways, from “wait-and-see” to “test and learn” to banning digitally enabled business models outright.⁸

Example: Wait and see

In 2017 The European Securities and Market Authority (ESMA) stated that blockchain technology had not reached a point where regulatory action is needed, so it took a ‘wait and see’ approach towards it.

“This approach should not be considered as passive, but instead one in which we can actively try to learn more about the innovation. By waiting to see how the innovation develops we do not risk stifling a potentially socially or economically useful product or process. ESMA does not think blockchain technology poses a risk to its three objectives of: stability, protection and integrity.”

They continued with this position until mid-2019 when the advice changed and some crypto currency tokens were subject to full regulation.⁹

Example: Test and learn

Regulators often look outside their jurisdictions to see if an innovation has

⁶ ITU Global ICT Regulatory Outlook 2020

⁷ GSMA <https://www.gsma.com/asia-pacific/resources/rps/>

⁸ Attrey, A., M Leshner and C. Lomax (2020), “The role of sandboxes in promoting flexibility and innovation in the digital age” OECD Going Digital Toolkit

⁹ www.esma.europa.eu/sites/default/files/library/esma50-164-2430_licensing_of_fintech.pdf

already been tested in another country. In some contexts, regulators can issue letters of no objection to give experiments a less formal “test-and-learn” approach. For example, the central bank in the Philippines has permitted time-limited pilot tests under letters of no objection for a number of years.¹⁰

Within these options, some regulators have opted to experiment with regulatory environments.

The Digital Health Innovation Plan from the US Food and Drug Administration aims to use a risk-based approach to regulate software-based medical technologies, including mobile medical apps (2018).¹¹

Outcome or performancebased regulation specifies the required outcomes or objectives, rather than the means by which they must be achieved, potentially giving firms the freedom to innovate while remaining in the spirit of the law. ANTC has adopted performance-based guidelines for the use of autonomous vehicles (ANTC 2018).¹²

¹⁰ CGAP www.cgap.org/blog/what-should-we-realistically-expect-regulatory-sandboxes

¹¹ Attrey, A., M Leshner and C. Lomax (2020), “The role of sandboxes in promoting flexibility and innovation in the digital age” OECD Going Digital Toolkit

¹² Attrey, A., M Leshner and C. Lomax (2020), “The role of sandboxes in promoting flexibility and innovation in the digital age” OECD Going Digital Toolkit



3. Expected benefits and identified concerns

a. Expected Benefits

There are a number of expected benefits for all regulatory sandbox stakeholders. Sandboxes can be used to test and understand both products and services as well as policy options. For regulatory authorities, the main expected benefit is enhancing supervisory understanding of new or changed risks brought by innovation, which can help to provide an adequate policy response. For innovators, the main benefits are that they can reduce regulatory uncertainties and help lower the high barriers to entry in the sector.

Regulatory agility

- Regulatory sandboxes can introduce greater agility into the regulation process¹³, and, by reducing regulatory uncertainty, can reduce the time required, and associated costs, to get innovative ideas to market.

Regulatory sandboxes can enable dialogue and contribute to learning

- Education of all the ecosystem stakeholders (from regulators to participants) through a collaborative approach can lead to better policy-making and laws (i.e. policy prototyping)
- Sandboxes may be the first step in opening dialogue or changing

organizational culture in places where there is an established, closed or conservative approach to regulation.¹⁴

- Regulatory sandboxes can provide a safe place for dialogue between regulators and industry (including new market players and those from other sectors);¹⁵ they offer a way to legitimize and open up discussions. This dialogue is important for regulators to learn, and it gives businesses more certainty in the testing.
- Regulatory sandboxes may provide enhanced networking and business development opportunities for start-ups and small businesses.

Enhanced innovation opportunities

- Building on the point about reducing regulatory uncertainty, the regulatory flexibility of sandboxes can enable live-market testing and market entry that otherwise may not have been possible. This can reduce the time to market for new innovations and can cut development costs for companies by reducing the chances that an idea will be rejected by regulators or the marketplace
- With greater confidence about a new technology or application, companies have more incentives to innovate.
- They can enhance the trust and confidence necessary for innovation across the marketplace.¹⁶

¹³ *Regulatory Sandboxes for Privacy Analytical Report, Business at OECD (BIAC)*

¹⁴ <https://www.cgap.org/blog/what-should-we-realistically-expect-regulatory-sandboxes>

¹⁵ *Regulatory Sandboxes for Privacy Analytical Report, Business at OECD (BIAC)*

¹⁶ *Regulatory Sandboxes for Privacy Analytical Report, Business at OECD (BIAC)*

Testing

- Sandbox testing can enable early identification of features or applications that may not be acceptable and the opportunity to modify them. The ability

to develop innovative products/services in the sandbox may provide a degree of assurance that experimental and testing phases will not contravene regulatory requirements.¹⁷

Box 2: Examples of how participant companies benefit from FinTech sandboxes

- The fact that the product is included in the sandbox may give comfort to customers that the services being rolled out during the trial are subject to scrutiny by regulators
- They can gain real market data and information of user experience in a controlled environment before launching them into the market
- Firms are subject to reduced capital requirements and simplified administrative duties depending on the activity they perform
- New players looking to obtain a license, but who do not meet the requisite track record or capital resources requirements, may seek exemptions from these requirements
- A faster option to bring innovative financial services or products to the market for testing and reducing the time and resources required from the applicants
- A cost-effective way to start operating a new business model and to see it mature on the market
- The sandbox allows for high-risk technologies to be tested in a limited environment before wider release
- Due to the regulatory sandbox, regulators can grant dispensations from rigid methods and provide a bespoke compliance arrangement
- The sandbox can be particularly attractive where larger firms want to invest in innovative technologies, or where established firms want to facilitate partnerships with innovative start-ups

Source: *A guide to Regulatory FinTech Sandboxes Internationally (2020) Baker McKenzie*

¹⁷ *Regulatory Sandboxes for Privacy Analytical Report, Business at OECD (BIAC)*

- Regulatory sandboxes can enhance companies' capacity for compliance, particularly for startups and small businesses. They can help companies meet their accountability obligations under applicable data protection laws and frameworks. Sandbox participation can help develop more robust approaches to risk assessment and to privacy-by-design.¹⁸
- Reduced regulatory uncertainty and the ability to conduct testing can make financing easier for innovative firms.

Privacy and cross border data flows

- Regulatory sandboxes can benefit regulators by increasing their capacity for cross-border co-operation among regulators through a better knowledge of the requirements of other jurisdictions.
- Privacy sandboxes may encourage more data sharing and enhanced cross-border data flows through a greater understanding of the shared principles and common challenges around data privacy.¹⁹

b. Identified Concerns

Trust and credibility

- Companies might be exposed to the possibility of adverse enforcement actions based on information shared in good faith with regulators.
- Information about innovative products and services shared in the sandbox environment could fall into the hands of competitors or enter the public domain prematurely.²⁰
- Regulatory sandboxes could compromise trust if effective rules are not in place to encourage transparency and credibility.
- The strength of sandboxes appears to be their speed of testing, but the limitation is that tests are usually incremental. Transformative change will nearly always require more complete regulatory reform.²¹
- The sandbox could open organizations to favorable or discriminatory treatment, the so-called "level playing field concerns".
- An overarching concern is that of "regulatory arbitrage" in the context of the overall strategies applied by jurisdictions to raise their attractiveness. The European Banking Authority in 2017

¹⁸ Regulatory Sandboxes for Privacy Analytical Report, Business at OECD (BIAC)

¹⁹ Regulatory Sandboxes for Privacy Analytical Report, Business at OECD (BIAC)

²⁰ Regulatory Sandboxes for Privacy Analytical Report, Business at OECD (BIAC)

²¹ CGAP <https://www.cgap.org/blog/what-should-we-realistically-expect-regulatory-sandboxes>

noted that fragmentation of approaches to regulatory sandboxes has led some stakeholder groups to call for harmonisation of sandbox criteria to avoid regulatory arbitrage. As jurisdictions compete for a share of the sandbox “pie” and the potential overall economic benefits it can bring, the concern is that some regulators are opting for a “race-to-the-bottom” in a bid to attract start-ups and investors. This could lead to compromises on consumer protection and financial stability.²²

Resourcing constraints

- Regulatory sandboxes’ availability could be limited to larger and better resourced companies, excluding those SMEs with fewer resources available to dedicate to participating in the sandbox. Without safeguards, regulatory sandboxes could be accessible only by certain players or industry sectors.
- Additionally, running a regulatory sandbox environment could strain the resources of those regulators wishing to be a host.

Lack of regulatory authority

- Legislative frameworks may not explicitly accommodate regulatory sandboxes. Clarity about regulators’ authority to implement and engage in regulatory sandboxes will be needed for their

successful deployment and to avoid the risk of undermining the credibility of regulators.²³

Cross sectoral and cross border implications

- Fragmentation of approaches to sandboxes across countries could limit the ability to run cross sectoral and cross border sandbox projects effectively and compromise the trust necessary to derive the benefits of the sandbox regime.²⁴
- Other legal issues, such as data privacy, data transfers, cyber security, enforceability of e-contracts and consumer protection laws, are also often prevalent in the use of big data, artificial intelligence, blockchain, cloud computing and e-payments. These issues cut across other regulators and agencies, so sectoral regulations cannot be considered in isolation.²⁵

²² Europa EU: [https://www.europarl.europa.eu/RegData/etudes/STUD/2020/652752/IPOL_STU\(2020\)652752_EN.pdf](https://www.europarl.europa.eu/RegData/etudes/STUD/2020/652752/IPOL_STU(2020)652752_EN.pdf)

²³ Regulatory Sandboxes for Privacy Analytical Report, Business at OECD (BIAC)

²⁴ Regulatory Sandboxes for Privacy Analytical Report, Business at OECD (BIAC)

²⁵ A guide to Regulatory FinTech Sandboxes Internationally (2020) Baker McKenzie



4. Sandbox creation and design

a. Objectives and motivations

When building a regulatory sandbox, it is essential to define objectives early. They help inform other design components, get stakeholder buy-in, set expectations, target implementation, measure results, and

identify where adjustments may be needed. A sandbox may have more than one objective, but whatever it is, it should be well aligned with the regulatory mandate and priorities.²⁶

Objectives tend to fall in to three distinct groups:

Objective	Implication
<p>Increase customer benefits:</p> <p>To improve convenience, bring new customer services to the market, lower the end-cost, and otherwise improve the customer experience through tech-enabled financial innovation.</p>	<p>The regulatory expectation is to see services already in place improved in areas relevant to customers and/or new services catering to under- and unserved customer segments or needs.</p>
<p>Promote competition:</p> <p>To increase the number of contenders in the market or a segment thereof and/or stimulate competitive behaviour among the entities that are already regulated.</p>	<p>The regulatory expectation is to have new entrants licensed and new services to reach the market.</p>
<p>Policy development and testing:</p> <p>To improve quickly and efficiently existing policy via development and testing in a live, real time environment.</p>	<p>By using insights and experience gained in the testing stage, competent authorities can react faster and more effectively to regulatory problems.</p>

Source: Based on CGAP report: *How to Build a Regulatory Sandbox*

However, we should also consider barriers to innovation that made the regulatory sandbox necessary in the first place. These barriers may have taken the form of costly compliance rules or regulatory uncertainty, for example. These barriers may be better tackled with alternative solutions, rather

than a full blown regulatory sandbox environment. Other regulatory tools could be better suited to addressing these barriers.

It is important that the objective setting exercise takes into account the mandate and priorities of the authority setting up the

²⁶ CGAP: *How to Build a Regulatory Sandbox*

regulatory sandbox environment. The objectives of the sandbox need to be in alignment with the mandate and priorities of the authority. Research done by CGAP in 2019 highlighted that the motivations driving the implementation of innovation facilitators were not always aligned with the legal mandate of the regulatory authority.²⁷

b. Consultative approach to sandbox creation

In a consultative approach to sandbox creation, regulators would make even the decision to set up a sandbox in consultation with industry. While there is no guarantee that consultation will deliver a more effective solution, it may help better to define the requirements of industry. This could be an informal consultation, e.g. taking the form of a survey of industry to identify issues to be addressed. If a decision is made to go ahead with the development of a regulatory sandbox environment, then the proposed sandbox framework should be considered with all relevant stakeholders before making a decision.

In 2018 the Milken Institute mapped the key dates in the introduction of sandboxes by the regulatory authorities of most countries. This analysis revealed that, on many occasions, regulators only consulted

industry after a sandbox framework was drafted.²⁸

There may be several reasons for the Milken Institute findings such as: reputational risk (concern that consultations with financial providers may be perceived as regulatory capture); lack of confidence (fear that direct interaction with industry may reveal a regulator's knowledge gaps) and unfamiliarity with new types of providers, who often speak in technological jargon. These are legitimate concerns, but all of them can be addressed with openness, transparency, clearly defined rules and preparation or support from a third party.²⁹

c. Iterative approach to design and build

When creating a sandbox, regulators often focus on the static, rule-like elements of sandbox design, such as framework documentation, eligibility requirements, application process, sandbox duration and application fees. These elements are common across many sandbox initiatives and have a "tangible" feel to them. They are therefore very visible and easy to focus on.

Sandbox teams may spend months developing preliminary design choices for a full-blown sandbox. However, a better approach might be to adopt an iterative

²⁷ CGAP–World Bank: *Regulatory Sandbox Global Survey* (2019)

²⁸ <https://milkeninstitute.org/sites/default/files/reports-pdf/MICFM-Response-GFIN-Consultation-10-14-2018-FINAL1.pdf>

²⁹ <https://www.cgap.org/blog/one-thing-regulators-should-do-launching-sandbox>

Box 3: Example of a consultative approach for establishing a regulatory sandbox

The experience of Capital Markets Authority of Kenya (CMA) illustrates the benefits of consulting providers early and often.

In 2017, CMA launched a consultative process to test the feasibility of a new regulatory approach to innovation. After organizing a workshop with industry, CMA conducted extensive research into innovation facilitators. It summarized its findings in a public consultative paper, offering international comparisons, and suggesting several approaches potentially suitable for Kenya, including a regulatory sandbox.

In 2018, CMA complemented this effort with a FinTech landscape analysis, which not only mapped existing FinTech activities in Kenya, but also asked FinTechs about key barriers they face in bringing innovations to the market. The feedback CMA received throughout this process proved valuable. It showed where a regulatory sandbox can help address specific regulatory barriers (such as an authorization process for new entrants or new products) and how it can do so.

Source: CGAP – One thing regulators should do before launching a sandbox

In March 2019 the Board of the Capital Markets Authority (CMA) approved the Regulatory Sandbox Policy Guidance Note (Regulatory Sandbox PGN) setting the stage for CMA to begin accepting applications for admission of fintech firms to its regulatory sandbox.

As at June 2020 there were six companies operating in the sandbox.

Source: kenyanwallstreet.com

approach to sandbox development. This is often the most efficient way to create an immediately operational environment, developing through feedback and updates from early users.

Regulators considering sandbox initiatives

could adopt this approach as it allows for the sandbox to be launched quickly and provides an opportunity for feedback and iteration. Indeed, evidence from several jurisdictions suggests that initial sandbox designs often evolve and adapt to fit local market conditions.³⁰

³⁰ <https://www.cgap.org/blog/better-way-create-regulatory-sandbox>

The following examples are of two sandboxes whose initial design had to be amended to meet the evolving needs of their respective markets. Firstly, from Hong Kong where the sandbox was initially aimed at incumbent banks but attracted FinTech, and so was expanded to meet that need, and secondly, the opposite experience from Sierra Leone.

Example: Hong Kong

The Hong Kong Monetary Authority (HKMA) initially launched its Fintech Supervisory

Sandbox (FSS) as a program for incumbent banks. During the first year of operation, however, HKMA received applications from technology firms requesting direct access to the FSS and soliciting feedback on emerging FinTech projects. Against this backdrop, HKMA upgraded to FSS 2.0 in 2017. This version includes expanded access for both incumbents and nonbank technology firms; an FSS chatroom to provide streamlined access, feedback and support for market participants; and increased formal coordination between HKMA, the Insurance

Box 4: Example of an iterative approach to regulatory sandbox application processes

Many early sandbox initiatives adopted elaborate application processes. As a result, written applications would run into multiple pages while providing little actual insight into the nature of the innovation to be tested. Several jurisdictions have taken steps to streamline their application processes. For example:

- Singapore has sharpened its sandbox application form and begun to explore whether “pre-defined (express) sandboxes” enable firms to conduct certain low-risk experiments quicker.
- The Canadian Securities Administrators have mandated pre-application conferences to assess sandbox fit prior to triggering the formal review process.
- The Hong Kong Monetary Authority recently launched the FinTech Contact Point, a chatroom that enables market participants to discuss potential sandbox applications with HKMA.
- Bank Negara Malaysia has begun to develop communication and licensing mechanisms that firms can use as alternatives to the regulatory sandbox.

Each of these changes flows from regulators’ early experiences processing and onboarding high-quality sandbox participants.

Source: CGAP – A better way to create a regulatory sandbox

Authority and Securities and Futures Commission on tests that may cut across multiple regulatory perimeters.³¹

At the end of 2019, pilot trials of 103 fintech initiatives had been allowed in the FSS, compared with 42 at the end of 2018. The HKMA also received 406 requests to access the FSS chatroom and seek supervisory feedback at the early stage of fintech projects. Around 70% of the requests were made by technology firms.³²

Example: Sierra Leone

The Bank of Sierra Leone's (BSL's) regulatory sandbox went in the opposite direction. Launched in early 2017 as a cohort-based program to encourage local FinTech innovation, BSL's dedicated sandbox team became the focal point within the Bank on issues related to innovation. Based on its early experiences, the team found that the nascent fintech market was producing only a few start-ups per year. Yet incumbents were frequently requesting access to the sandbox. By focusing only on start-ups, the team was making incumbents wait unnecessarily long to test their innovations. With increasing inquiries from incumbent financial institutions, BSL separated its regulatory sandbox into two tracks: a cohort-based track for start-ups and a rolling admission/open door sandbox for incumbents.³³

These experiences demonstrate that the sandbox environment will most likely not be "right first time". Indeed, it should be expected that the sandbox will need to evolve over time to become the best fit for the market it serves and the jurisdiction within which it operates.

³¹ <https://www.cgap.org/blog/better-way-create-regulatory-sandbox>

³² https://www.hkma.gov.hk/media/eng/publication-and-research/annual-report/2019/AR2019_E.pdf

³³ <https://www.cgap.org/blog/better-way-create-regulatory-sandbox>



5. Sandbox governance and regulatory authority

a. Sandbox governance

For regulatory sandboxes to work for all stakeholders involved, established policies and processes are required together with an appropriate infrastructure to ensure the best results. Governance procedures provide the required framework for potential participants to apply, operate and exit the sandbox environment successfully.

Rules and Criteria

There is a need for clear definitions of the roles and responsibilities of each of the sandbox stakeholders, for privacy safeguards to be in place, clear criteria for what benefits and/or innovations the applicants need to demonstrate, internal regulatory sandbox operating procedures, and the demarcation of the supervisory functions.

Well defined foundational rules for the operation of the sandbox will help to set stakeholder expectations and provide clear operational guidance. Sandboxes will benefit from an established and transparent application process where prospective participants are required to meet certain evaluation criteria to assess the eligibility of their applications to be accepted as a participant in the sandbox.

Clearly defined start and end dates for sandbox projects must be established and participants must clearly understand the

period of time during which the sandbox is active. Doing so defines for companies the period during which the assurances provided to sandbox participants with respect to regulation apply.³⁴

Regulatory clarity

The existence and scope of the regulatory forbearance afforded to participant companies while they operate within the sandbox environment must be established with certainty. Once the period of sandbox testing ends, these waivers will no longer be valid. Therefore, for participants to avoid any exposure to regulatory enforcement action, it will be necessary to ensure that they fully understand the extent of the sandbox operation.

To participate in the regulatory sandbox with confidence, and to extract the greatest benefit from it, companies need clarity about their responsibility to comply with regulation and how regulators will address failures to meet obligations. Regulators will also need to determine what assurances are appropriate, and how they can be communicated clearly to companies. However, the assurances provided to sandbox participants no longer apply when sandbox testing ends, and they do not apply to other activities.³⁵

Resources

For participant companies, a commercial decision can be made regarding the resources required, and their associated

³⁴ *Regulatory Sandboxes for Privacy Analytical Report, Business at OECD (BIAC)*

³⁵ *Regulatory Sandboxes for Privacy Analytical Report, Business at OECD (BIAC)*

costs, before deciding to apply to and participate in the sandbox.

For regulators, the decision making process is more detailed. Once the costs and benefits have been evaluated, the resources required in the set up, operation and management of the sandbox will require appropriate funding. The sandbox dimensioning will determine, to a large extent, the resources and budget required. See Practicalities of sandbox hosting (page 30) for further discussion.

Evaluation of outcomes

Established criteria against which regulatory sandbox findings are assessed and evaluated should be clearly communicated. In addition to providing a tool to assess sandbox outcomes, these criteria can also help regulators and companies determine whether, in the light of sandbox findings, a technology should be brought to market.³⁶

Monitoring, reporting and communications

Active engagement by the regulator, in monitoring and evaluating the outcomes, is necessary in order to ensure the viability and trustworthiness of the sandbox environment, but also its further development and improvement on an iterative basis.

Some regulators issue exit reports for the outcomes of sandbox trials. These exit

reports can serve as an opportunity for a review of the process, the outcomes and the lessons learned. For example, the UK ICO's sandbox activity ends with the publication of an exit report that summarises the process and the key activity that was undertaken and, if agreed at that time and appropriate to do so, a statement of regulatory comfort.³⁷

The ability to communicate the complexities of regulatory sandboxes to a generalist audience is important for encouraging trust. It can be achieved by holistic reporting, through publishing exit reports, results and statistics. In some cases, regulators (and companies) will wish to publish the findings and outcomes of the sandbox process, for example to allow innovators across the market to benefit. In these cases, where the outcomes of the sandbox are published and made available to the public, criteria should be established to determine when broad publication is appropriate, and what steps should be taken to protect confidentiality and intellectual property interests.³⁸

Data protection and data security

Established requirements for data safeguards and companies' responsibilities to protect data security and confidentiality: Data used in the sandbox will need to be protected from loss, breach, compromise or inappropriate access. Requirements for how data will be secured while used in the sandbox will be needed to promote trust.³⁹

³⁶ *Regulatory Sandboxes for Privacy Analytical Report, Business at OECD (BIAC)*

³⁷ <https://ico.org.uk/for-organisations/the-guide-to-the-sandbox/what-will-happen-when-we-exit-the-sandbox/>

³⁸ *Regulatory Sandboxes for Privacy Analytical Report, Business at OECD (BIAC)*

Protection of intellectual property

rights: To participate confidently in the sandbox, companies will need assurances that their intellectual property in the sandbox will be protected and their protections under patent or trade secret law will not be compromised.⁴⁰

Protection of individuals' data: While sandboxes are intended to enable companies to test the application and the limits of regulation when applied to innovative technologies and data use, individuals' data must still be protected. Protections for individuals' rights in their data, and transparency about the existence of regulatory sandboxes for privacy and how they work are needed to make the space safe for individuals. But protections should not fully replicate every aspect of the extant law and regulation in a way that limits the ability to experiment and innovate.⁴¹

Guidance to address cross-jurisdictional issues

Digital technologies and data innovation occurs across all industry sectors. Regulators and companies participating in the sandbox will require guidance about how to address cross-jurisdictional issues that may arise in a sandbox project that involves more than one regulatory regime, e.g. data

protection and telecommunications law, or data protection and financial services law.⁴²

b. How authority is exercised

Government authorities can use several tools to exercise their authority: to ensure sandbox goals are met; and to ensure that the sandbox operation is safeguarded.

Key Principles

Each sandbox is set up with guidelines that can be parameters to ensure it does not spill over into "real consequences". These guidelines can also be principles that applicant firms must agree to adhere to and for which firms that overstep the parameters can be expelled from the sandbox. For example, before granting a waiver, the UK Solicitors Regulation Authority (SRA) must check the applicant is at least advancing some of the objectives of the Legal Services Act: protecting and promoting the public interest, obeying the rule of law, improving access to justice, protecting the interest of consumers, promoting competition, encouraging a diverse and effective legal profession, and increasing the understanding of citizens' legal rights.⁴³

³⁹ *Regulatory Sandboxes for Privacy Analytical Report, Business at OECD (BIAC)*

⁴⁰ *Regulatory Sandboxes for Privacy Analytical Report, Business at OECD (BIAC)*

⁴¹ *Regulatory Sandboxes for Privacy Analytical Report, Business at OECD (BIAC)*

⁴² *Regulatory Sandboxes for Privacy Analytical Report, Business at OECD (BIAC)*

⁴³ UK SRA Innovation Space: <https://www.sra.org.uk/solicitors/resources/innovate/sra-innovate/>

Restrictions on who can be admitted to the sandbox

The regulator decides which firms can join the sandbox and enjoy the exploratory environment. Firms must apply to join, with an authorization process that should ensure that the firm will act ethically, in the public interest, and with a commitment to innovation. In the application, a firm must present a coherent vision of what they want to test, how they will promote innovation, how they will interact with the public, and what technology solution they are using. The authority can also put more evidence-based requirements on applicants. For example, Singapore set up a barrier of due diligence for firms that wanted to participate in their financial services sandbox. Any firm needed to show a previous “laboratory test” of the product or service that they wanted to test in the sandbox. This would show preliminary outcomes, as well as the firm’s understanding of the need for evaluation.⁴⁴

Regulatory waivers/No enforcement action letters

A regulator can issue individual guidance or specific waivers to firms if there are burdensome rules that firms request relief from. For example, the UK SRA generally publishes a summary of all waiver decisions, including an overview of the application. It gives some guarantee to the firm that they can take controlled risks and that they will

not face punishment. Still, the regulator maintains discretion to hold firms liable if the public is harmed.⁴⁵

Controlled lists of requirements that can be relaxed or maintained

The authority can prescribe the list of what regulations may be altered, relaxed, or removed. They can also insist that some rules will be kept without a waiver.⁴⁶

Rolling evaluation

The authority can evaluate the outcomes throughout the sandbox behaviour. The authority typically spells out broad metrics (around promoting innovation, promoting consumer benefit) in their initial guidelines, and then individual firm participants should define how their particular ‘innovation’ will be evaluated. There could be a formal report letter, including information on agreed-upon measures that demonstrate the success of the innovation, significant issues that have occurred and any complaints or dissatisfaction. In the UK fintech sandbox, one firm was forced to exit the sandbox because of lack of consumer uptake of their offering.⁴⁷

Informed Consent

The authority can require a firm to ensure that potential consumers understand they are participating in an experiment when the

⁴⁴ <https://medium.com/legal-design-and-innovation/regulatory-sandboxes-for-legal-services-innovation-7438bb9b658e>

⁴⁵ UK SRA Innovation Space: <https://www.sra.org.uk/solicitors/resources/innovate/sra-innovate/>

⁴⁶ <https://medium.com/legal-design-and-innovation/regulatory-sandboxes-for-legal-services-innovation-7438bb9b658e>

⁴⁷ <https://medium.com/legal-design-and-innovation/regulatory-sandboxes-for-legal-services-innovation-7438bb9b658e>

Box 5: How authority is exercised – UK FCA regulatory sandbox tools

The regulatory sandbox provides access to regulatory expertise and a set of tools to facilitate testing. The tools are not always needed and their value will depend on the nature of each business and their test.

Restricted authorisation

To conduct a regulated activity in the UK, a firm must be authorised or registered by us, unless certain exemptions apply. Successful firms will need to apply for the relevant authorisation or registration in order to test.

We have a tailored authorisation process for firms accepted into the sandbox. Any authorisation or registration will be restricted to allow firms to test only their ideas as agreed with us.

This should make it easier for firms to meet our requirements and reduce the cost and time to get the test up and running.

Informal steers

We can provide informal steers on potential regulatory implications of an innovative product or business model that is at an early stage of development.

Waivers or modifications to our rules

We may be able to waive or modify an unduly burdensome rule, for the purpose of the test. We are not able to waive national or international law.

No enforcement action letters

For cases where we can't issue individual guidance or waivers but believe it's justified in light of the particular circumstances and characteristics of the sandbox test, we can issue 'no enforcement action' letters.

As long as the firm deals with us openly, keeps to the agreed testing parameters and treats customers fairly, we accept that unexpected issues may arise and wouldn't expect to take disciplinary action.

The letter would only apply for the duration of the sandbox test, only to our disciplinary action and would not limit any liabilities to consumers.

Individual guidance

If you are unclear on how our rules apply to your firm, we can explain how we would interpret the requirements in the context of your specific test.

Source: UK FCA <https://www.fca.org.uk/firms/innovation/regulatory-sandbox>

firm is trying to engage them with the ‘innovation’. For example, the Singapore Ministry of Health requires that relevant firms in its Licensing Experimentation and Adaptation Programme (LEAP) sandbox are obliged to display the regulatory sandbox logo.⁴⁸

Need and readiness for sandbox testing

Applicants are often required to demonstrate that they need the regulatory exemptions or waivers offered by the relevant sandbox. This can require the identification of the particular regulatory requirement that constrains the activity of the entrepreneur. In addition, it enables regulatory authorities to identify innovative models that may be able to operate within the current regulatory framework and provide them with relevant and appropriate guidance.

Participants can also be asked to demonstrate their readiness to begin testing, i.e. that firms are in the developmental stage and able to test their product in a controlled environment. Often, this can include well-specified documentation of the proposed testing to be undertaken in the regulatory sandbox, alongside the relevant tools and resources required to realise the testing.⁴⁹

Limits by duration, sector or geography

Regulatory Sandbox testing should be for a limited period of time. This can vary and can be extended at the will of the regulator but is, initially, usually between 6 and 12 months.

Many sandboxes are limited by industry sector, these restrictions are typically in line with the domain of the administering regulatory authority.

Control may also be exercised via geographic limits. This is often with respect to drones or autonomous vehicles, limiting testing to specific areas or streets. For example, in Thailand, the National Broadcasting and Telecommunications Commission operates an areabased regulatory sandbox for frequency testing in certain areas.⁵⁰

Safeguard mechanisms

Most regulatory sandboxes include safeguards or mechanisms to achieve overarching regulatory objectives, for example, consumer protection or data privacy. Some more prescriptive sandboxes outline the specific forms of products and services that can be tested through the sandbox in an effort to limit any potential negative consequences. However, this may negate the growth and development possibilities of the regulatory sandbox exercise.⁵¹

⁴⁸ [https://www.moh.gov.sg/home/our-healthcare-system/licensing-experimentation-and-adaptation-programme-\(leap\)--a-moh-regulatory-sandbox](https://www.moh.gov.sg/home/our-healthcare-system/licensing-experimentation-and-adaptation-programme-(leap)--a-moh-regulatory-sandbox)

⁴⁹ Attrey, A., M Leshner and C. Lomax (2020), “The role of sandboxes in promoting flexibility and innovation in the digital age” OECD Going Digital Toolkit

⁵⁰ www.nbtc.go.th

⁵¹ Attrey, A., M Leshner and C. Lomax (2020), “The role of sandboxes in promoting flexibility and innovation in the digital age” OECD Going Digital Toolkit

Analysis by the International Monetary Fund (IMF)⁵² found that all the fintech sandboxes in eight jurisdictions examined had safeguards to mitigate the risks and contain the potential consequences of the live tests, such as:

- Limits on the number and types of customers
- Limits on the value of services offered
- Additional reporting obligations
- Closer monitoring and reporting requirements
- Additional consumer protection measures (such as compensation arrangements, dispute resolution and redress mechanisms)
- Risk management controls (e.g., against cyberattacks and system disruptions)
- Specification of regulations that cannot be waived

⁵² IMF SDN/17/05: *Fintech and Financial Services: Initial Considerations*



6. Global examples and lessons learned

An in-depth analysis of fintech sandboxes by Baker McKenzie has provided a comprehensive guide, overview, and comparison of regulatory sandbox regimes internationally, covering the Asia Pacific, EMEA and Americas regions. The valuable examples and lessons shown in this section of the report, which are relevant across different economic sector, are drawn from that guide.⁵³

a. Who can apply to participate in the sandbox?

The analysis shows that suitable participants are usually businesses that hold existing licenses or businesses that are likely to be regulated. There are more flexible approaches in the UK and Canada as well as in South Africa, where there is no formal sandbox but engagement is encouraged.

- **Australia:** Fintech businesses that meet certain eligibility criteria, who are looking to provide financial services or engage in credit activities, and are likely to be regulated by the Australian Securities and Investments Commission (ASIC).
- **Hong Kong:** Firms licensed by the Hong Kong Securities and Futures Commission (SFC) and start-up firms that intend to be licensed by the SFC can apply to be in the sandbox operated by the SFC. The same

process applies to the Hong Kong Monetary Authority (HKMA) sandbox and the Hong Kong Insurance Authority (IA) sandbox.

- **UK:** The UK Financial Conduct Authority's (FCA) sandbox is open to authorized firms, unauthorized firms that require authorization and technology businesses. It has proved popular, not least with fintech start-ups and those not yet authorized by the FCA, with each group, or "cohort" as they are referred to, being oversubscribed – roughly one in three applicants are accepted into any given cohort.
- **Canada:** The Canadian Securities Administration Regulatory Sandbox is open to business models that are innovative from a Canadian market perspective.
- **Singapore:** Sandbox Express: Monetary Authority of Singapore (MAS) will take a phased approach by starting with an initial set of activities regulated by the MAS and will continue to review whether appropriate constructs could be established to facilitate meaningful experiments for other regulated activities. For a start, Sandbox Express will be available specifically for: (a) insurance brokers (b) recognized market operators (c) remittance businesses.
- **South Africa:** The primary authorities

⁵³ A guide to Regulatory FinTech Sandboxes Internationally (2020) Baker McKenzie

governing the fintech sector in South Africa are the South African Reserve Bank (SARB) and the Financial Sector Conduct Authority (FSCA). These authorities have not yet created specific laws, rules or regulations establishing regulatory sandboxes in South Africa. However, any firm proposing to engage in fintech activities or the delivery of fintech products and services, not otherwise specifically regulated under prevailing legislation, can engage with the SARB or other relevant authority to operate under a supervised and monitored regime, noting that the regulator has shown a willingness to participate in such engagements.

b. How and when do participants apply to utilise the regulatory sandbox?

Application procedures vary from a more relaxed notification-only approach to more formal procedures based on completing an application form. However, the latter approach is far more commonplace.

- **Australia:** No formal application is needed to rely on ASIC's fintech licensing exemption. However, an entity must give written notice to ASIC informing it of the intention to rely on the exemption.
- **Hong Kong:** By email to the appropriate

regulatory body (HKMA, SFC or IA)

- **Malaysia:** All applications must be submitted to the Director of Financial Sector Development of BNM using the prescribed form. Electronic submissions are encouraged
- **Singapore:**
 - **Sandbox:** Existing Financial Institutions (FIs) should approach their institutions' MAS case officer. New players should write to the MAS Fintech Office. All applications must be submitted in writing, in the template prescribed by the MAS.
 - **Sandbox Express:** All applications must be submitted by email in the template prescribed by the MAS.
- **UK:** The FCA accepts applications to the sandbox on a cohort basis with two six-month test periods per year.

Having collated and analysed information from many jurisdictions, there appear to be two approaches to the timing of applications to the sandbox: Either the "anytime" approach or the "cohort" approach.

- **Australia:** Any time
- **Hong Kong, Malaysia & Singapore:** Any time. However, applicants should have completed their own due diligence and evaluation on how they will meet the objectives and principles of the sandbox and the evaluation criteria prescribed by the regulators, as applicants are required

to demonstrate how they will meet these requirements in the application.

- **Taiwan:** The application can be made at any time once the application form, innovation experimentation plan and other related documents are completed.
- **UK:** The FCA advertises twice yearly for firms to join new cohorts.

Sandbox hosts will need to bear in mind the resources required for the application process, including application screening and timing, and the impact that these requirements will have on the resources required to deliver the necessary service level.

c. What are the evaluation criteria used to determine eligibility?

The recurring evaluation criteria used to determine if an application is eligible to use a specific sandbox, from which best practice can be adduced, includes:

1. **Regulatory intervention** – The requirement that regulatory intervention is necessary must be stated. The product or service presented may not need the sandbox and/or may be supported by other regulatory tools.
2. **Innovation** – Consideration will be given as to whether the functionality of the

product, service, or solution is genuinely innovative and will create measurable benefits to consumers and the industry.

3. **Boundary** – There should be a clearly defined scope of the pilot trial (including any phases), timing and termination arrangements.
4. **Benefits** – There should be demonstrable consumer and economic benefits, such as increased efficiency, reduced operational and use costs or the enhancement of the interests of consumers.
5. **Customer Protection Measures** – Adequate measures will be put in place to protect the interests of customers during the trial, including proper process for selecting customers who understand the associated risks and voluntarily join the trial, enhanced complaint handling procedures, a mechanism for timely and fair compensation of customers' financial losses caused by any failures of the trial, and appropriate arrangements for customers to withdraw from the trial.
6. **Risk management controls** – A risk assessment must have been undertaken, with identified risks mitigated or managed through adequate control procedures and relevant response measures. Compensating controls are required to mitigate the risks arising from less than full compliance with supervisory requirements and the risks posed to other customers.

Box 6: Eligibility criteria for applying to the UK FCA regulatory sandbox⁵⁴

Criteria	Key Questions	Positive Indicators	Negative Indicators
In Scope	Are you looking to deliver innovation that is either regulated business or supports regulated business in the UK financial services market?	Innovation appears to be intended for the UK market	Innovation does not appear to be intended for use in the UK
Genuine Innovation	Is your innovation new or a significantly different offering in the marketplace?	Desk research produces few or no comparable offerings already established on the market Step-change in scale	There are numerous examples of similar offerings already established on the market It looks like artificial product differentiation
Consumer Benefit	Does the innovation offer a good prospect of identifiable benefit to consumers (either directly or via heightened competition)?	The innovation is likely to lead to a better deal for consumers directly or indirectly You have identified any possible consumer risk and proposed mitigation The innovation will promote effective competition	Likely detrimental impact on consumers, markets or the financial system It looks designed to circumvent regulations
Need for a Sandbox	Do you have a genuine need to test the innovation in our sandbox? Applicants aren't required to need a sandbox tool to meet this criteria	The innovation does not easily fit the existing regulatory framework, making it difficult or costly to get the innovation to market You will benefit from using a sandbox tool to test in a live environment You have no alternative means of engaging with the FCA or achieving the testing objective The full authorisation process would be too costly/difficult for a short viability test	Live testing is not necessary to answer the question that you want answered (to achieve the testing objective) You are able to undertake the test easily without the support of the FCA A dedicated supervisor or our Direct Support team could answer the query
Ready for Testing	Are you ready to test the innovation in the real market with real consumers?	You have a well-developed testing plan with clear objectives, parameters and success criteria Some testing has been conducted to date You have the resources to test in the sandbox You have sufficient safeguards in place to protect consumers and is able to provide appropriate redress if required	Unclear objectives for testing and/or plans for testing are underdeveloped Little to no testing has been done You do not have the resources for the test The proposed customer safeguards are inadequate and/or appropriate redress cannot be provided

⁵⁴ <https://www.fca.org.uk/firms/innovation/regulatory-sandbox-prepare-application>

- 7. Testing** – Testing plans should include: a plan for testing in the sandbox setting out the timeline and key milestones; measures for success for testing; testing parameters (duration, customer or transaction limit); customer safeguards; risk assessment; exit strategy.
- 8. Resources** – The applicant should be ready for the test in the sandbox by demonstrating availability of adequate resources to support the test scenarios and the necessary expertise to manage potential risks.
- 9. Readiness** – The applicant should be able to demonstrate that the initiative is currently ready for testing in the sandbox and must have clearly defined test scenarios prepared.
- 10. Monitoring** – Identification of the processes involved in the trial and close monitoring of the trial must form part of the application.
- 11. Exit and transition strategy** – The applicant should present a realistic business plan for leaving the sandbox, as well as an exit strategy for the pilot run if it has to be terminated without success.

Sandbox hosts will need to have the appropriate processes in place to assess the applications received, with the resources required to meet participants' expectations.

d. Duration of and transition from the regulatory sandbox

The period of time that participants are allowed to utilise the regulatory sandbox is typically limited in duration either by a rule or on a case-by-case basis. At the end of the experiment, participants in some jurisdictions may apply for an extension to the testing period.

- **UK:** The FCA sandbox is intended for testing for a limited duration. The testing duration should be long enough to enable statistically relevant data to be obtained from the test (e.g., 3 to 6 months)
- **Australia:** Twelve months for the ASIC Fintech Licensing Exemption. However, ASIC will consider applications for an extension of the testing period for an additional 12 months.
- **Malaysia:** 12 months from the date of commencement unless extension is approved by BNM.
- **Taiwan:** The period of the experiment approved by the FSC will be limited to one year. However, an applicant may, one month before the approved experimental period ends, apply to the FSC with reasons attached seeking approval for an extension; the extension shall be limited to one occasion and be no longer than six months.

Upon completion of the sandbox testing period, participants must prepare to exit the environment. There are various steps and approaches that have been adopted, including that legal and regulatory requirements relaxed by the sandbox will expire and that a pathway to licensing is established:

- **Australia:** The exemption can no longer be relied upon. Businesses should ensure

that they apply for a license during the exemption period, before the testing period expires.

- **Hong Kong:** Banks and insurers may proceed to launch their services and products formally on a broader scale provided that they can comply with supervisory requirements applicable outside the sandbox regime.

Box 7: UK Information Commissioner's Office (ICO) sandbox exit procedures

Early exit strategy

One of the terms of participation is for you to develop an exit strategy, should you need to terminate your participation earlier than expected. This exit strategy requires our approval as part of the bespoke plan. This ensures the minimal detriment to data subjects, for example if live testing of real data has begun. You should consider this condition prior to applying to join the Sandbox.

Planned exit

The length of your Sandbox participation will depend on your organisation, the complexity of your innovation project and the data protection challenges that you require support on. An approximate exit date from the Sandbox engagement will be agreed prior to your participation beginning, however we will try to keep this date flexible, subject to our team's capacity.

The maximum length of engagement we can offer is currently 12 months, but we are open to considerably shorter engagements.

Before exiting, we will arrange a final meeting with you to discuss any outstanding queries, evaluate progress and to obtain your feedback on the Sandbox more generally. Following this, we will send you an exit report that summarises the process and the key activity that was undertaken and, if agreed at that time and appropriate to do so, a statement of regulatory comfort.

Source: <https://ico.org.uk/for-organisations/the-guide-to-the-sandbox/what-will-happen-when-we-exit-the-sandbox/>

- **Malaysia:** After the sandbox expires, the participant can proceed to deploy the product, service or solution on a wider scale provided it can meet all the legal and regulatory requirements prescribed by BNM. If applicable, the graduating participant may be required to be licensed, or approved, by BNM in the same manner as traditional financial institutions.
- **Taiwan:** When applying to enter the sandbox, an “exit mechanism” is required to be included under the innovation experiment plan. If the applicant’s experimentation proves to be a success, it may lead to the amendment of relevant laws or regulations.
- **UK:** In the FCA sandbox, firms must submit a final report summarizing the outcomes of the test before transitioning out of the sandbox.



7. International sandboxes: Privacy concerns and cross border data flows

a. Privacy concerns with data flows

Data privacy laws can foster trust and enable innovation. Trust (in the form of laws that protect consumers' privacy) and innovation (which requires flexibility in the law) are not mutually exclusive.

In fact, flexible data privacy rules can be seen as capable of enhancing innovation, enabling the development and taking to market of new products and services while, at the same time, protecting consumers. These flexible data privacy rules can stimulate a virtuous circle and some data protection authorities (such as the UK ICO) have introduced sandboxes to encourage controlled experimentation.

Sandboxes can be established for different reasons but, in essence, they are where innovation and regulatory challenges meet. One of these topical challenges is around data privacy concerns, especially with regard to cross border data flows.

Sandboxes can be used to address some of these privacy concerns, but these international sandboxes raise unique questions and have different challenges to those of domestic sandboxes. Recent research in this area by BIAC (Business at OECD)⁵⁵ found the following five requirements specific to cross-border regulatory sandboxes for privacy:

1. A multinational framework may be needed to assist in creating and running sandboxes that involve the use of data that is transferred and shared across borders. Such a multinational instrument would articulate the role of DPAs and establish measures to be taken to promote cooperation between authorities in administering the sandbox and extracting benefits.
2. Cross-border regulatory sandboxes for privacy benefit from clear definitions of roles and responsibilities among regulators. This is particularly important when the level of maturity of privacy law and regulation differs from country to country, and in situations where not every participating country will have a data protection authority.
3. International cooperation – Cross-border regulatory sandboxes will only function well if participating countries establish agreed-upon responsibilities, particularly with respect to implementation of safeguards. They also will require clear articulation of the manner in which the parties will participate in the benefits and outcomes of the sandbox.
4. It may be necessary for data protection authorities to articulate incentives to encourage participation. For example, the opportunity to engage in policy prototyping; to better align law and practice in a region; or to facilitate the

⁵⁵ *Regulatory Sandboxes for Privacy Analytical Report, Business at OECD (BIAC)*

responsible flow of data.

5. Safeguards may be needed when sandboxes involve sharing data between countries and economies whose privacy laws and protections are at varied stages of development. In cases where a country may not have a data protection authority in place, it will be important to determine what authority can participate in the regulatory sandbox.

b. Case study: ASEAN Regulatory Pilot Space

Rationale

The ASEAN⁵⁶ Cross Border Data Flows Regulatory Pilot Space (RPS) was developed in conjunction with GSMA⁵⁷ under its programme of sub regional policy dialogues between policymakers and the mobile industry.

In 2018 ASEAN published its Framework on Digital Data Governance (DDG) and was actively looking for ways to implement it. The importance attached to cross-border data flows was clear, identified as a key initiative within the DDG and seen as a driver of innovation in the 2018 report: “Regional

Privacy Frameworks and Cross-Border Data Flows. How ASEAN and APEC can Protect Data and Drive Innovation”⁵⁸. Given this alignment, a white paper was produced in 2019 for ASEAN, the purpose of which was to provide TELSOM/ATRC⁵⁹ with a proposal for the DDG to become operational across ASEAN, in a short time scale. The proposal was for ASEAN policymakers to put in place an international regulatory sandbox for a time bound period that would allow cross border data flows amongst the participating ASEAN countries. The proposal was designed for use by mobile network operators, the IoT ecosystem, start-ups, SMEs and other stakeholders of the digital ecosystem.

Whatever their level of adoption of data privacy and cybersecurity laws, member states of ASEAN had to feel able to experiment with cross border data flows in a controlled environment, for a defined purpose and a predefined amount of time.

One significant driver of the project was that this regulatory sandbox could be used as a stepping-stone towards a formal mechanism for cross border data flows⁶⁰, the aim of the initiative within the DDG.

A sandbox approach also allows the member states to consider and try different ways to

⁵⁶ Association of South East Asian Nations (Brunei, Cambodia, Indonesia, Laos, Malaysia, Myanmar, Philippines, Singapore, Thailand and Vietnam)

⁵⁷ GSMA is the industry trade association representing the mobile industry and the broader mobile ecosystem (www.gsma.com)

⁵⁸ https://www.gsma.com/publicpolicy/wp-content/uploads/2018/09/GSMA-Regional-Privacy-Frameworks-and-Cross-Border-Data-Flows_Full-Report_Sept-2018.pdf

⁵⁹ TELSOM: Telecommunications and IT Senior Officials Meeting. ATRC: ASEAN Telecommunication Regulators' Council

⁶⁰ The formal mechanisms for cross border data flows include the creation of a certification process and the adoption of corporate binding rules, both of which ASEAN are currently working towards.

address their legitimate cybersecurity concerns, in a way that would not delay or stop the development of a digital society, for the benefit of their citizens and SMEs (which, as in Africa, constitute a crucial part of the economy).

In ASEAN, the requirements around the use of personal data vary greatly from country to country. Some countries already provide a range of lawful mechanisms to transfer personal data, some do not, and others impose localisation (or data sovereignty) measures specifically to force data to be kept within the country.

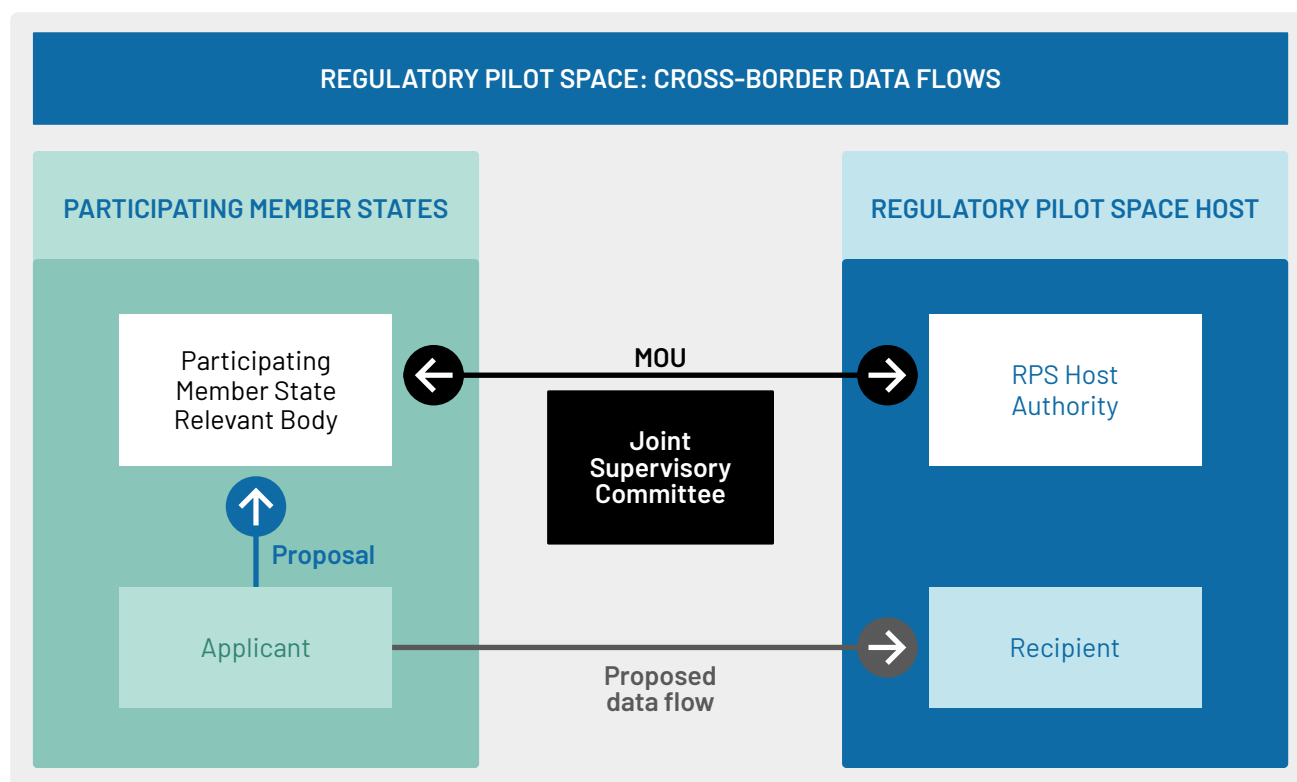
Implementation of the RPS for ASEAN allows, firstly, personal data to be transferred between two or more ASEAN member states in a controlled environment that would help companies develop new

products and services benefiting consumers in the region.

Secondly, it builds confidence among governments and public authorities in the region by demonstrating that it is possible to allow personal data to be transferred to another country without losing the ability to enforce domestic laws in the interests of individuals or in the interests of national security.

Thirdly, it could demonstrate economic advantages for ASEAN if efficiency savings, analytical insights or new business models are applied to stimulate the domestic digital economy.

It should be stressed that the RPS for ASEAN is not a permanent solution, but a bridging solution while ASEAN member states



develop their data privacy frameworks and develop interoperable mechanisms for cross border data flows.

Operational roles and responsibilities

In order to understand the data flows and the responsibilities of the various involved parties, the key elements of the RPS, illustrated in the diagram, are each described in detail below.

■ **RPS for Cross-Border Data Flows (CBDFs)**

- The RPS for CBDFs is not physical like a server or data centre. Instead it should be seen as the entire arrangement that provides the necessary safeguards and forbearance to allow exploration of data flows in a way that protects the interests of individuals, applicants, authorities and member states (MS)
- The aim of the RPS is not to add extra layers of regulation but to act as an accelerator for innovation

■ **MoU (Memorandum of Understanding)**

- The MoU is an agreement between two or more ASEAN MS setting out the relevant commitments and incorporating the RPS Rules (see below)
- An MoU is not necessary, for example, provided that there is regulatory certainty for companies, in which case a joint letter from the authorities may suffice

■ **RPS Rules**

- The foundational documentation that sets out:
 - The purpose and scope of the RPS for CBDFs
 - The eligibility requirements for each of the roles
 - The minimum safeguards to be implemented and demonstrated by the applicant

■ **Joint Supervisory Committee**

- Under the bilateral or multilateral MoU Framework, a joint committee is established to consider proposals and supervise activities within the scope of the proposal

■ **Proposal**

- Must show evidence of meeting the eligibility criteria for proposals (e.g. tangible benefits for consumers) and how it meets the binding safeguards under the accountability mechanism of the RPS rules.

■ **Participating member state**

- Wishes to explore how to facilitate data flows
- Has data localisation requirements or does not have easy mechanism in place to allow data flows
- Is willing to waive strict enforcement of relevant rules within RPS

■ **Participating member state relevant body**

- Has existing power to supervise data

activities of applicant

- Is willing to waive strict enforcement of relevant rules within RPS
- Meets the eligibility criteria set out in the RPS Rules
- Signs the MOU incorporating the RPS Rules

■ **Applicant**

- Wishes to transfer data to recipient in third country using RPS
- Must meet the eligibility criteria defined by the RPS
- Responsible for submitting proposal and providing sufficient information to the Joint Supervisory Committee for it to consider the proposal and supervise appropriately
- Commits to providing the data privacy safeguards set out in the RPS rules to ensure that individuals' data privacy rights in the participating MS are not adversely affected by the proposed movement of data
- Responsible for selecting and entering into minimum contractual obligations with the Recipient
- Commits to providing the government security and intelligence authorities with the same level of access to the in-scope data as if the data had continued to reside in the participating MS except to the extent that waivers and exceptions are granted e.g. in relation to CBDF restrictions.

■ **RPS Host**

- Must meet eligibility criteria set out in the RPS Rules including that it has:
 - An existing data privacy (or equivalent) law
 - A functioning data privacy (or equivalent) supervisory authority that meets the criteria of the RPS Host Authority (see below) set out in the RPS rules
 - A mature level of rule of law with courts and enforcement bodies that are able to take enforcement action on behalf of the participating member state relevant body

■ **RPS Host Authority**

- Meets the eligibility criteria set out in the RPS Rules including that it is capable of taking enforcement action on behalf of the participating MS relevant body in relation to the recipient or any representative or establishment of the applicant within its jurisdiction
- Signs the MOU incorporating the RPS rules

■ **Recipient**

- Must be an organisation able to provide a high standard of information security and meet any eligibility criteria set out in the RPS rules
- Selected by applicant in accordance with the applicant's procurement and

due diligence processes

- Must agree to the minimum contractual obligations set out in the RPS rules

The DDG recognises that different levels of maturity and local laws are present in the ASEAN MS. In practice, the creation of an ASEAN cross border data flows sandbox would require that (as a minimum) two or more MS enter into MoUs to allow the operation of the sandbox.

When developing the RPS proposal, the same – or similar – questions were often posed by the various different stakeholders. In response, a “Frequently Asked Questions” document⁶¹ was produced. This approach is very effective in conveying complex messaging in an easy to understand and well accepted format. It is also straightforward to update, amend and improve as the sandbox evolves.

⁶¹ <https://www.gsma.com/asia-pacific/resources/rps/>



8. Encouraging the creation of sandboxes

For regulators to be encouraged to create a regulatory sandbox environment, they will need to have a robust business case for providing a sandbox environment. They will need to be clear what it will involve and how, in practical terms, it can be delivered.

Furthermore, there will need to be demonstrable market readiness from participant stakeholders, together with a plan for overcoming identified obstacles to implementation.

We are seeking to engage Regulators and Policymakers with the intention of implementing Regulatory Sandboxes. The main drivers are the fact that the pace of innovation in product and service delivery is ever so high and Regulation needs to catch up as quickly as possible – GSMA⁶²

a. Clear objectives and feasibility assessment

Clear objectives for creating a regulatory sandbox environment need to be identified, either from existing best practice or from industry. Once these objectives are articulated and tailored for a particular jurisdiction, ambition and motivation from the regulator will be needed in order to drive

creation of the sandbox. A clear understanding of the benefits that will be derived from the sandbox will provide a compelling business case.

The innovation sandbox will help shape regulations and tackle the challenges faced by operators. It will enable government entities, ICT companies, start-ups, investors and the network operators to work together in partnership to strengthen the leadership in various technologies – CA Kenya⁶³

The concept would be of interest to enable us to experiment and determine the best regulatory approaches to some services or technologies – NCA South Sudan⁶⁴

Making use of a Regulatory Sandbox would help companies, including mobile operators, to calibrate their innovative products, services and technologies and clarify legal uncertainties in the design phase thereby helping them to get to market quicker. We believe that sandboxes will facilitate speedier development of new frameworks – GSMA

The scope/aim needs to be clearly defined and also applicable regulatory rules/ exemptions need to be clear before engaging – Vodacom Group⁶⁵

Some telecoms regulators in Africa are already taking specific steps to encourage the creation of a sandbox in their jurisdiction. For example, CA Kenya is

⁶² Survey response from GSMA, February 2021

⁶³ Survey response from Communications Authority Kenya, February 2021

⁶⁴ Survey response from National Communications Authority South Sudan, February 2021

⁶⁵ Survey response from Vodacom Group, February 2021

Box 8: Regulatory sandbox feasibility assessment

Work Stream	Core Topics
Purpose and Objective	<ul style="list-style-type: none"> • Rationale for launching a sandbox • Internal alignment on regulatory sandbox initiative
Legal	<ul style="list-style-type: none"> • Statutory mandate • Range of regulatory discretion (e.g., tools including no-action letters, licensing requirements, no-objection letters, etc) • Regulatory and statutory requirements (e.g., AML/CFT, consumer protection, etc.) • Intra/inter-regulatory coordination
Regulatory Capacity and Dedicated Resources	<ul style="list-style-type: none"> • Internal regulatory capacity to implement sandbox and/or related initiatives • Executive sponsor of sandbox initiative ("Institutional Champion") • Internal, crossfunctional team responsible for delivering sandbox initiative
Market Conditions	<ul style="list-style-type: none"> • Market perception regulation/regulator • Need for a regulatory sandbox or related programs
Alternatives and Complements	<ul style="list-style-type: none"> • Assess alternative formal and informal regulatory initiatives that could serve the same purpose as the sandbox more effectively or at lower cost

developing the necessary institutional frameworks, the current focus being on developing an innovation framework, and undertaking capacity development.

The Regulatory Sandbox Feasibility Assessment (developed by CGAP)⁶⁶, helps create a structured, high-level project plan for assessing, designing, and implementing a regulatory sandbox (see Box 8). Experience suggests that the success of sandbox initiatives requires careful initial evaluation of the legal, regulatory, market, economic conditions and the regulatory capacity or restrictions to help tailor the sandbox.

b. Practicalities of sandbox hosting

Establishing, operating and participating in a regulatory sandbox are three distinct steps that all require different levels of resource and management input that impose costs on regulators and companies in terms of resources and budget.

Regulators will also need appropriate funding to support the new legal and regulatory structures needed to implement, operate, monitor, learn and benefit from the

⁶⁶ CGAP report: *How to Build a Regulatory Sandbox*

Box 9: Case study: The evolution and development of the Regulatory Sandbox Licence of the Economic Development Board, Mauritius

Driver for sandbox creation

The driver for creating the Regulatory Sandbox License (RSL) came because the Economic Development Board (EDB) was receiving so many innovative project ideas that did not fit into the existing regulatory framework. Many of these projects could deliver job creation, encourage transfer of technology, skills and facilitate investment but there was no suitable regulatory framework to allow these projects to come to fruition.

Research was done to investigate how these projects could be accommodated and the concept of the RSL was realised. The necessary framework then had to be constructed to support the RSL.

Legal framework

In July 2016 the introduction of the RSL in Mauritius was announced in the 2016/2017 Budget Speech. Accordingly the Investment Promotion Act 2000 was amended to include the RSL. Through the RSL, the Board of Investment (BOI) had the power to authorise activities for which no legal framework exists, as well as derogating certain unnecessary licenses or permits that are hindering implementation.

In May 2017, the BOI approved the issuance of its first RSL to a crowdfunding platform. Subsequently a number of projects were licensed. The EDB commenced its operations as a statutory body in January 2018 following the merger between the BOI, Enterprise Mauritius and the Financial Services Promotion Agency. The EDB took over their respective mandates.

Subsequently, in February 2018, the Financial Services Commission formally launched the FinTech and Innovation-Driven Financial Services Regulatory Committee, which, in May 2018 released its report identifying priority areas in the FinTech space to be considered for regulation. One of the recommendations of the report was the setting up of a National Regulatory Sandbox Licence Committee (NRSL), which was formally announced by the Hon Prime Minister in the 2018-2019 Budget.

Box 9: Case study: The evolution and development of the Regulatory Sandbox Licence of the Economic Development Board, Mauritius (contd.)

Governance Committee

In accordance with the budget measure and a cabinet decision all FinTech applications are referred to the NRSL Committee which represents the technical committee referred to in the Economic Development Board Act.

The NRSL Committee was set up in September 2018 and is chaired by Lord Bletso (a Member of the House of Lords, UK). The NRSL Committee brings together policy makers and regulators, including the Ministry of Finance and the Ministry of Financial Services, the Bank of Mauritius, the Financial Service Commission (FSC), the EDB, and the Attorney General's Office, to determine FinTech applications submitted to the EDB's Sandbox Licence.

Resulting licenses issued

Since the setting up of the NRSL Committee the EDB has issued 10 licences for a diverse portfolio of FinTech projects. These projects include Initial Coins Offerings (ICOs), cryptocurrencies exchange platforms, digital wallets, crowdfunding platforms and blockchain enabled alternative securities platforms, blockchain based KYC systems and robo-advisory wealth management platforms.

Source: Interviews with EDB, Mauritius. January & February 2021

sandbox. See Box 9 for a case study from the Economic Development Board (EDB) Mauritius.

Securing these funds will be a practical challenge for regulators who may already have budget constraints. However, if the value of hosting a regulatory sandbox environment has been clearly verified via the feasibility assessment exercise, then

securing the necessary funding should become more achievable.

Funds: It is hoped that the cost of setting up Regulatory Sandboxes is far outweighed by the economic benefits they could stimulate. Those regulators or officials seeking to set up a Regulatory Sandbox need to be equipped with evidence and arguments that will help them make the case to those who provide the

Box 10: Practicalities of setting up a regulatory sandbox

- CGAP and the World Bank Group conducted a joint survey in 2019 on regulatory innovation facilitators, including accelerators, sandboxes and innovation hubs. There were 31 responses from regulatory agencies in 28 countries, including jurisdictions in Africa, the Americas, Asia and Europe.
- 85% of regulators cited that their motivation for setting up a sandbox or other innovation facilitator was to keep up with the markets and to learn about emerging innovations
- Wide range of investment in terms of human and capital resources:
- Human capital ranged from 1 to 25 full-time employees
- Dedicated financial resources varied from \$25k to over \$1 million
- Jurisdictions with the largest budgets and the most FTEs dedicated to the sandbox accepted the highest number of applications
- Sandboxes are highly resource intensive if they are to deal with demands from the market

Source: CGAP 2019 survey

<https://www.findevgateway.org/slide-deck/2019/07/cgap-world-bank-regulatory-sandbox-global-survey-2019>

funds. There may also be a role for international organisations or financial institutions to provide funding. – GSMA

Research has shown (see Box 10) that there is a direct link between staff complement (and, by association, the size of the required budget) and the number of applications that the sandbox can process. Furthermore, it can be surmised that the more detailed the processes (around application, evaluation,

monitoring and reporting) the more resources will be required to provide this service level.

c. Demonstrable market readiness

Demand from potential participants is key for the regulatory sandbox environment to be a success. As demonstrated by the EDB Mauritius case study, demand from

innovative projects that fall outside the current regulatory framework can stimulate the creation of the sandbox.

For Africa, regulatory sandbox environments not only have the potential to be an enabler for innovation and investment and their associated benefits, but are also seen as a potential lever for driving change in regulatory frameworks that can improve regulatory agility:

Positive feedback has been received from two major regional Telco groups in Sub-Saharan Africa who have embraced the idea of promoting Regulatory Sandboxes as a tool to help modernise regulatory practices. – GSMA

d. Overcoming identified obstacles

When surveyed on the potential obstacles within their jurisdiction or footprint of operation, several obstacles were clearly identified:

The challenge of the legal framework and the lack of knowledge – West African Regulator⁶⁷

The major challenges are in the areas of legal and regulatory framework which are of course stemming from knowledge gaps and limited regulatory experience – NCA, South Sudan

Lack of policy, strategy and/or framework to facilitate sandboxes for entrepreneurs/innovators and lack of capacity to support – CA Kenya

A lack of knowledge and familiarity. We anticipate the rate of adoption of Regulatory Sandboxes will be slow at first, as regulators become familiar with the concept – GSMA

Some recommendations on how to address and overcome these obstacles are discussed in Chapter 9 Accelerating the adoption of sandboxes and Chapter 10 Tangible next steps.

e. Examples of participants in established regulatory sandboxes

Kenya Capital Markets Authority (CMA) regulatory sandbox – Pyypl⁶⁸

In June 2019 CMA admitted Pyypl Group Limited to its Capital Markets Regulatory Sandbox. Pyypl (pronounced as 'people') seeks to test its blockchain-based platform for the issuance of debentures (unsecured bonds) among entrepreneurs over a period of 12 months. It is licensed by the securities market regulator in United Arab Emirates –

⁶⁷ Survey response, February 2021

⁶⁸ <https://www.capitalfm.co.ke/business/2020/06/cma-admits-two-additional-firms-to-the-regulatory-sandbox/>

Financial Services Regulatory Authority in line with the Regulatory Sandbox requirements. Its subsidiaries in Bahrain and Kazakhstan are also active and licensed by the Central Bank of Bahrain and Astana Financial Services Regulatory Authority (Kazakhstan) respectively.

Kenya CMA regulatory sandbox – Belrium⁶⁹

In June 2019 CMA also admitted Belrium Kenya Limited to its Capital Markets Regulatory Sandbox to test a blockchain-based and shareable know your customer (e-kyc) solution for capital markets intermediaries and investors. The test will be executed in a period of 9 months. Its parent company Belfrics Malaysia Sdn Bhd is a reporting institution with the Bank Negara Malaysia.

Economic Development Board Mauritius – Fundkiss⁷⁰

In July 2017, the online platform Fundkiss became the first company in Mauritius to obtain the Regulatory Sandbox License (RSL), hence allowing the company finally to operate. Before that, there was no specific legislation for crowdlending in Mauritius. With the RSL, Fundkiss became the first crowdlending platform in Mauritius, connecting entrepreneurs with investors and helping companies of all sizes to thrive.

In a nutshell, the regulatory sandbox plays an essential role in the growth, adoption and investment of fintech innovation, at the same time providing suitable protection for consumers and investors' interests. The RSL has allowed Fundkiss to provide an alternative financing solution to Mauritian SMEs.

Kenya CMA regulatory sandbox – CDSC⁷¹

The Central Depository and Settlement Corporation (CDSC) was admitted in the CMA regulatory sandbox in April 2020 with the intention of testing its screen-based Securities Lending and Borrowing (SLB) over a period of 5 months.

Securities Lending and borrowing (SLB) is the temporary transfer of securities from one party to another, with a simultaneous formal agreement to return the securities at a pre-agreed price either on demand or at an agreed date in the future. Full legal title to the securities is transferred from the lender to the borrower so that the securities can be used entirely as the borrower desires, including selling them onward to others. In this case, borrowers are market participants who identify trading opportunities that will more than make up for the lending fee costs and include market makers, arbitragers, directional short-sellers or players in the derivatives and Exchange Traded Funds

⁶⁹ <https://www.capitalfm.co.ke/business/2020/06/cma-admits-two-additional-firms-to-the-regulatory-sandbox/>

⁷⁰ <https://fundkiss.mu/blog/what-is-sandbox-regulatory-license-issued-by-economic-development-board-mauritius/>

⁷¹ <https://kenyanwallstreet.com/cdsc-admitted-as-fourth-firm-in-cmas-sandbox/>

markets. On the other hand, lenders are institutional investors, particularly pension funds and insurance companies, that are long or medium-term investors in the securities. They, therefore, lend securities in order to earn a lending fee and increase the return on their portfolio.

Consequently, the new development aims to improve liquidity by unlocking securities to facilitate trades and subsequently increasing the number of transactions. Moreover, the test of the Screen-based model will ensure that any investor can perform an SLB transaction through approved Central Depository Agents.

and had worked with the MoH to better understand the risks and co-create corresponding mitigations.

Singapore Licensing Experimentation & Adaptation Programme (LEAP) – Whitecoat and My Doc⁷²

Launched in 2018, the Singapore Ministry of Health LEAP gave a platform to examples of new innovative services including Telemedicine (greater convenience and improved accessibility to medical support and medication through new digital self-help options) and Mobile Medicine (greater accessibility for patients who, for a variety of reasons, are unable to attend a hospital or a clinic, by bringing medical practitioners to their bedside).

Providers in the sandbox, such as Whitecoat and My Doc, were mainly early entrants into the telemedicine and mobile medicine space

⁷² [https://www.moh.gov.sg/home/our-healthcare-system/licensing-experimentation-and-adaptation-programme-\(leap\)--a-moh-regulatory-sandbox](https://www.moh.gov.sg/home/our-healthcare-system/licensing-experimentation-and-adaptation-programme-(leap)--a-moh-regulatory-sandbox)



9. Accelerating the adoption of sandboxes

a. Stakeholder engagement and awareness building

When considering the creation of a regulatory sandbox, regulators should clearly define the objectives and the challenges that need to be addressed. Following that exercise, in order to promote the sandbox environment and accelerate its adoption, governments need to dedicate sufficient resources to support implementation. It is crucial to engage industry early in the process to get its perspective and secure buy-in.

While there is currently no universal template or set of best practices to follow, regulators can consult publicly available resources. These include learning from those jurisdictions that already have a regulatory sandbox in place, regardless of the industry sector, engagement with other regulators through collaboration exercises and, of course, through appointing expert consultants.

With regards to stakeholder engagement, GSMA proposes to provide substantive arguments and evidence of the benefits of Regulatory Sandboxes in a way that will help regulators and officials make their case when they are seeking funds or approvals from government departments.

A collaborative approach to the initiative is called for by potential participants and regulators alike:

The provision of regulatory sandboxes requires a collaborative engagement with the sector and a dialogue with market players – Mobile operator, Côte d'Ivoire⁷³

A detailed consultation and issuance of a framework for application of the regulatory sandbox approach such that it is institutionalised – Mobile operator, Nigeria⁷⁴

The Authority will be looking to collaborate with partners to develop and implement an innovation Strategy – CA Kenya

In addition, it should be acknowledged that in order to participate in a regulatory sandbox, companies must invest budget and resources, with the exercise also having to make sense from a commercial point of view. Therefore, incentives for participation need to be considered to encourage companies to engage in regulatory sandbox testing.

b. Knowledge sharing and capacity building

Sharing of knowledge via institutional collaboration within Africa or through the sub-regional bodies, together with co-operation between regulators in different

⁷³ Survey response, February 2021

⁷⁴ Survey response, February 2021

sectors of the economy and the sharing of global best practices would assist those with less experience in this area to overcome identified obstacles.

Strong channels need to be developed for training and knowledge-sharing. Early adopters of Regulatory Sandboxes should be encouraged to gather evidence of the benefits of Regulatory Sandboxes demonstrating where this has led to increased potential for economic activity and made regulation fit for purpose. – GSMA

Africa has an advantage as the frameworks necessary for this knowledge-sharing to take place at a sub-regional level are already in place e.g. ECOWAS⁷⁵, WATRA⁷⁶, SADC⁷⁷ and CRASA⁷⁸.

International organisations and sub-regional bodies can support the efforts of national level sandbox development:

West African Regulator: strengthening of cooperation and collaboration between institutions.

NCA, South Sudan: much needed support in the area of capacity building and knowledge sharing

Mobile operator, Nigeria: Sharing of best practice (knowledge and experience from other jurisdictions) to provide regulators with

comfort on the merits and safety of the approach.

In regard to knowledge-sharing, GSMA calls for the establishment of channels for training and knowledge sharing around Regulatory Sandboxes. Any efforts that will help in sensitising stakeholders on the steps, details, processes, etc. involved in Regulatory Sandboxes will be welcome pieces of support.

Indeed, CA Kenya is already taking the step of developing a *framework including an Innovation and Research and Development Strategy to institutionalize the use of sandboxes, but notes that Resources are required for institutional capacity development.*

International organisations such as Smart Africa have already taken steps and promoted capacity building through an online course on regulatory sandbox environments delivered in December 2020.

c. The role of regional bodies and industry bodies

Africa already benefits from a distinct continental identity. For example, the

⁷⁵ Economic Community of West African States

⁷⁶ West African Telecommunications Regulatory Assembly

⁷⁷ Southern African Development Community

⁷⁸ Communications Regulators' Association of Southern Africa

African Union has recently brokered high profile agreements such as the African Continental Free Trade Agreement (AfCFTA) and the Malabo Convention on Cyber Security and Personal Data Protection.

This strong foundation is reinforced by effective sub-regional bodies such as ECOWAS and SADC. These bodies already have legal and regulatory frameworks, therefore it should be possible to introduce and encourage the concept of regulatory sandbox environments successfully at this level. This was achieved in ASEAN, as described in the case study, even though ASEAN member states do not have the same level of integration as ECOWAS, for example.

Regional economic communities already have laws and regulations that are applicable at a member level, developing a forbearance capability within these communities would allow more innovative service provision to be explored and greater efficiencies of scale and scope created – Etisalat Group⁷⁹

Donor funding or support from relevant banking institutions is necessary to enable certain countries to introduce the frameworks required for regulatory sandboxes.

The possible next steps ... drafting some of the requirements, processing, monitoring and evaluation criteria and other regulatory tools

Box 11: Future regulatory frameworks and sandboxes: A European strategy for data

“The Commission’s approach to regulation is to create frameworks that shape the context, allowing lively, dynamic and vivid ecosystems to develop. Because it is difficult to fully comprehend all elements of this transformation towards a data-agile economy, the Commission deliberately abstains from overly detailed, heavy-handed ex ante regulation, and will prefer an agile approach to governance that favours experimentation such as regulatory sandboxes...” (emphasis added)

“In parallel, the EU will also actively promote its standards and its values with its partners around the world. For instance, the EU will support Africa in creating an African data economy for the benefit of its citizens and businesses.” (emphasis added)

Source: <https://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1593073685620&uri=CELEX%3A52020DC0066#footnoteref54>

⁷⁹ Survey response from Etisalat Group, February 2021

for managing a sandbox. These can not be undertaken in isolation as external assistance will definitely be required, especially in crafting the necessary regulatory guidelines required for such a regime. – NCA South Sudan

As for action and enterprise from industry bodies, GSMA proposes to *Develop practical roadmaps, resources and templates that regulators can access easily to help them as they set up Regulatory Sandboxes and as they seek funds and approval.*

GSMA states that it will continue its *Engagements with regional Regulators and Policymakers with Vodacom Group calling for international organisations to Advocate for sandbox development in relevant international, regional and sub-regional fora.*

International organisations, such as the ITU, are contributing, for example via its ICT-centric Innovation Ecosystem: Kenya Country Review report⁸⁰ which recommends the building of open data sandboxes for experimentation with new technology and methodologies for service delivery.

Furthermore, support is also available from international organisations, such as the EU (see Box 11).

⁸⁰ ITU <https://www.itu.int/en/ITU-D/Innovation/Documents/Publications/Kenya%20Country%20Review%20-%20ICT%20centric%20Innovation%202019.pdf>



Given the findings of the survey for this report (albeit with a relatively small number of respondents), the appetite for capacity building training (for example, for the Smart Africa online program in December 2020) and the utilisation of existing sandboxes in Africa (such as Mauritius EDB and Kenya CMA), it can be safe to conclude that the African digital ecosystem is ready for, and will benefit from, the introduction of regulatory sandbox environments. It will also benefit from external support to encourage the creation and accelerate the adoption of regulatory sandboxes, which could take a number of different forms.

The identified tangible next steps for stakeholders have been arranged into the following three areas: capacity building, knowledge sharing, and external support.

a. Capacity building

1. Support the delivery of capacity building training sessions, which could be modelled on the approach taken by Smart Africa, aimed at building up theoretical knowledge supplemented by case studies, global best practices and lessons learned from examples, including from other industry sectors and regions
2. Support the provision of practical workshops aimed at a more granular level of detail to support regulatory sandbox development and implementation

b. Knowledge sharing

1. Encourage collaboration and consultation between domestic stakeholders
2. Encourage cross-sector regulator co-operation and collaboration
3. Support international co-operation and collaboration efforts between institutions, for example WATRA, CRASA

c. External support

1. Support the establishment of a flagship regulatory sandbox tool kit containing practical roadmaps, resources and templates to set up, fund, operate and monitor regulatory sandbox environments
2. Identify partnership and collaboration opportunities, as well as financial support from international organisations, such as donor organisations or development banks, to encourage the establishment of regulatory sandboxes
3. Build a register of recommended and experienced international experts, who can provide tailored and specific consulting support to regulators, policy makers and sub-regional bodies as required.



www.afdb.org

African Development Bank Group

Immeuble du Centre de Commerce International
d'Abidjan CCIA

Avenue Jean-Paul II
01 BP 1387
Abidjan 01, Côte d'Ivoire

Contact us:

Nicholas Williams
Manager ICT Operations
n.williams@afdb.org

Uyoyo Edosio
Principal ICT and Innovation Expert
u.edosio@afdb.org

© 2022 African Development Bank
All rights reserved



AFRICAN DEVELOPMENT BANK GROUP
GROUPE DE LA BANQUE AFRICAINE
DE DÉVELOPPEMENT