



Framework for Emerging Technologies Regulatory Sandbox

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EXECUTIVE SUMMARY

The Communication Authority of Kenya (CA) is the regulatory agency tasked with facilitating the development of Kenya's information and communications technology sector. This includes the management of telecommunications, postal and courier services, radio communications, broadcasting and multimedia, electronic commerce, and cyber security. This responsibility entails managing the country's numbering and frequency spectrum resources, administering the Universal Service Fund, and safeguarding the interests of consumers of ICT services.

The regulatory sandbox is an alternative regulatory tool that allows the Authority to access testing in a controlled environment of new and emerging technology products and services and provides relevant information for understanding the evolution of technology. The rapid advances of digital technologies and their convergence must be matched with well-informed regulatory approaches. To maximise the benefits of digital technology innovation, the Authority is creating an enabling environment to facilitate innovation while safeguarding consumer interests.

An adaptive and collaborative policy framework suited to address the evolving complexities that come with the advancement of digital technologies is imperative for successfully establishing a regulatory sandbox. In an increasingly convergent age of digital technologies, forming diverse and effective collaborations with diverse stakeholders, such as those in the digital technology ecosystem, is essential to achieving the objective of the regulatory sandbox.

The Authority will directly supervise participants in the sandbox and implement a platform to receive, process, and monitor sandbox participants' progress. The focus on innovation sets the Authority's sandbox apart from existing regulatory tools. It provides the data and insights that ensure the Authority has exposure to new ICT technologies and services that can inform policy and regulation

KEY TERMS

Regulatory Sandbox	A regulatory environment for conducting tests of new innovative products and services with the potential to deepen and develop specific markets. These live tests are conducted on a limited scale and for a limited period to contain the risks associated with the innovations. The sandbox provides an evidence-based tool for fostering innovation while remaining vigilant over consumer protection and maintaining market stability, while minimizing risks.
Testbed	A controllable regulatory environment that enables experimentation. Testbeds allow for evaluating equipment, devices, or applications in a realistic environment to see how they will behave and react.
Sandbox Applicant	An Individual, Partnership, or company that has applied for admission to participate in the regulatory Sandbox.
Sandbox Participant	An applicant admitted to participating in the Regulatory Sandbox.
Sandbox graduate	A participant who has exited from a regulatory sandbox upon accomplishing the test.
Framework	A logical structure that guides the development of a study.
Grey matter	The knowledge, expertise and intellectual capacity of the regulatory authority overseeing a sandbox encompass their understanding of emerging technologies, innovative business models, and regulatory challenges associated with the asandboxed activities.
Test Authorization	Permission is granted to a sandbox participant to conduct testing of a new or/innovative technology solution within a controlled environment with no or limited end-user exposure.
Innovation hub	An initiative to help participants leverage intellectual capacity to nurture new ideas, generate business models and concepts, and develop new technologies.
Incubators	Programs or organisations that support early-stage start-ups or small businesses.
Innovation facilitator	It is a function or entity that aids and supports the invention process. It provides support, advice, or guidance to regulated or unregulated firms in navigating the regulatory framework or identifying supervisory policy or legal issues.

1. INTRODUCTION

The rapidly changing ICT sector and emerging technologies present great opportunities and challenges that may require a new regulatory approach. For example, digital innovators, researchers, and solution providers are rapidly developing new technologies and business models and bringing them to market. Policymakers and regulators must not only be able to keep pace with these developments but also anticipate shifts in the market and provide the interventions required to facilitate a conducive regulatory environment.

Increasingly, the Authority needs to answer questions like, “How can we make good use of the digital opportunities while effectively countering the risks?” and “How do we achieve a balance between access to the market for new digital technologies and consumer safety and market risks?”.

The regulatory sandbox is one mechanism the Authority can implement to reduce regulatory uncertainty and increase clarity and compliance by helping emerging innovators build capacity and cooperate with regulators.

Policymakers and regulators are increasingly incorporating new and agile regulatory tools that facilitate a dynamic, evidence-based regulatory environment to test new products, services, and technologies that are not directly applicable to the existing regulatory frameworks.

Over the past years, regulators have emphasised the importance of broadening the legal framework to allow for experimental regimes for innovation that provide a safe space for digital experimentation, such as innovation testbeds and regulatory sandboxes, to allow the fine-tuning of new business models and foster the resilience of future networks and services.

ICT regulators in Colombia, Mexico, France, Thailand, and Saudi Arabia, among others, have set up regulatory sandboxes as an alternative regulatory tool to test new business models, fast-track market entry for small, non-traditional, or new players, connect the unconnected and assess the resilience of future networks and services. Other regulatory entities are in the process of doing so.

Against this backdrop, the Authority is developing this regulatory sandbox to support innovation by exploring the application of innovative regulatory solutions, which will effectively shape the future of the ICT landscape and provide more opportunities for open collaboration, innovation, economic growth, and better lives for citizens.

2. PURPOSE AND OBJECTIVES

A regulatory sandbox is a tool for developing evidence-based regulations, policies, frameworks, and guidelines on new digital technologies and innovations; the evidence gathering can help the Authority and policymakers mitigate regulatory, security, and consumer concerns on the impact of new ICT innovations.

Some general objectives and principles could apply to any regulatory sandbox, and while there will be some differences between Country approaches, the general objectives of ICT regulatory sandboxes include

- i. Enhancing Digital Inclusion
- ii. Fast-tracking digitalisation
- iii. Stimulating and supporting innovation
- iv. Enhancing market development and consumer benefit
- v. Enhancing competition and consumer protection
- vi. Supporting economic growth

2.1. Objectives

The specific objectives of the Authority's regulatory sandbox framework for emerging technologies are as follows:

- a. To enhance the understanding, deployment, and adoption of new and emerging technologies and services;
- b. To support an evidence-based approach to the regulation of emerging technologies; z
- c. To ensure sufficient safeguards for privacy and consumer protection in deploying new technologies and services;

2.2. Benefits of the Regulatory Sandbox

- a. **Reduced time-to-market at potentially lower cost:** Delays driven by regulatory uncertainty disproportionately affect first-movers and discourage innovation. Time-to-market can be increased by about a third at a lower cost of product lifetime revenue.
- b. **Better access to finance:** Innovative start-ups rely on investment, much of it through equity funding. Regulatory uncertainty at a crucial growth stage means that start-up firms find it harder to raise funds and achieve lower valuations as investors try to factor in risks they need to assess better. Sandboxing may significantly reduce this uncertainty.
- c. **More innovative products are reaching the market:** Due to regulatory uncertainty, some innovations are abandoned at an early stage. The sandbox framework enables firms to manage regulatory risks, potentially introducing more solutions to the market.
- d. **Contained consequences of failure:** The Sandbox aims to provide an environment where its impact on consumers and the innovator will be limited if an experiment fails.
- e. **Reaching the best solution for the customer:** Regulatory sandboxes provide a leeway to defer the result of a product until the best solution for customers is reached.

- f. **Support for the Incubation of Start-Ups:** Incubation is a support process that accelerates the successful development of start-ups and fledgling companies by providing entrepreneurs with an array of targeted resources and services. The incubator's primary goal is to produce successful firms that leave the incubation program financially viable and freestanding. Incubator graduates have the potential to create jobs, commercialise new technologies, and strengthen local and national economies.

2.3. Alternative Regulatory Tools

The decision tree demonstrates the considerations and explorations that guide the Authority when establishing the sandbox. All other regulatory tools and options must be considered alongside the objectives achieved; a regulatory assessment is needed to determine the appropriate tool. It will ensure regulatory efficiency in the existing regulatory frameworks and that the sandbox is not trying to reinvent the wheel but rather facilitating regulations that do not exist.

A regulatory sandbox is designed to provide clarity for innovators who need to fit neatly within existing frameworks and definitions. A collaborative approach to the regulatory sandbox would mean the participants have access to several different regulators simultaneously to help solve 'grey matter' regulatory issues. The regulatory clarity provided, regardless of the regulatory tool, should translate to a participant being able to access the market with greater clarity that is compliant with 'potential' regulation. It is essential to highlight that there are various alternatives to a regulatory sandbox, the sandbox is not the answer to all regulatory dilemmas, and all regulatory tools should be explored. These include test licences, innovation testbeds, or innovation hubs, all of which may be applicable options based on the desired objective for each case.

A test licence is granted to an existing licence holder or a non-licensee to conduct testing of a new solution or technology within a controlled environment with no or limited end-user exposure. The technology or solution being tested could still be under development, unlicensed, or not type-approved and would still undergo further enhancements. The test outcomes are always shared with the Authority that granted the test license.

The purpose of a regulatory sandbox is to test market-ready solutions against regulation, which is different from the purpose of a test authorisation or license, which is intended to test the feasibility and viability of a particular technology or solution for the market. A new solution can go from testing with a test license to a regulatory sandbox to ascertain security and market fit in a regulatory context.

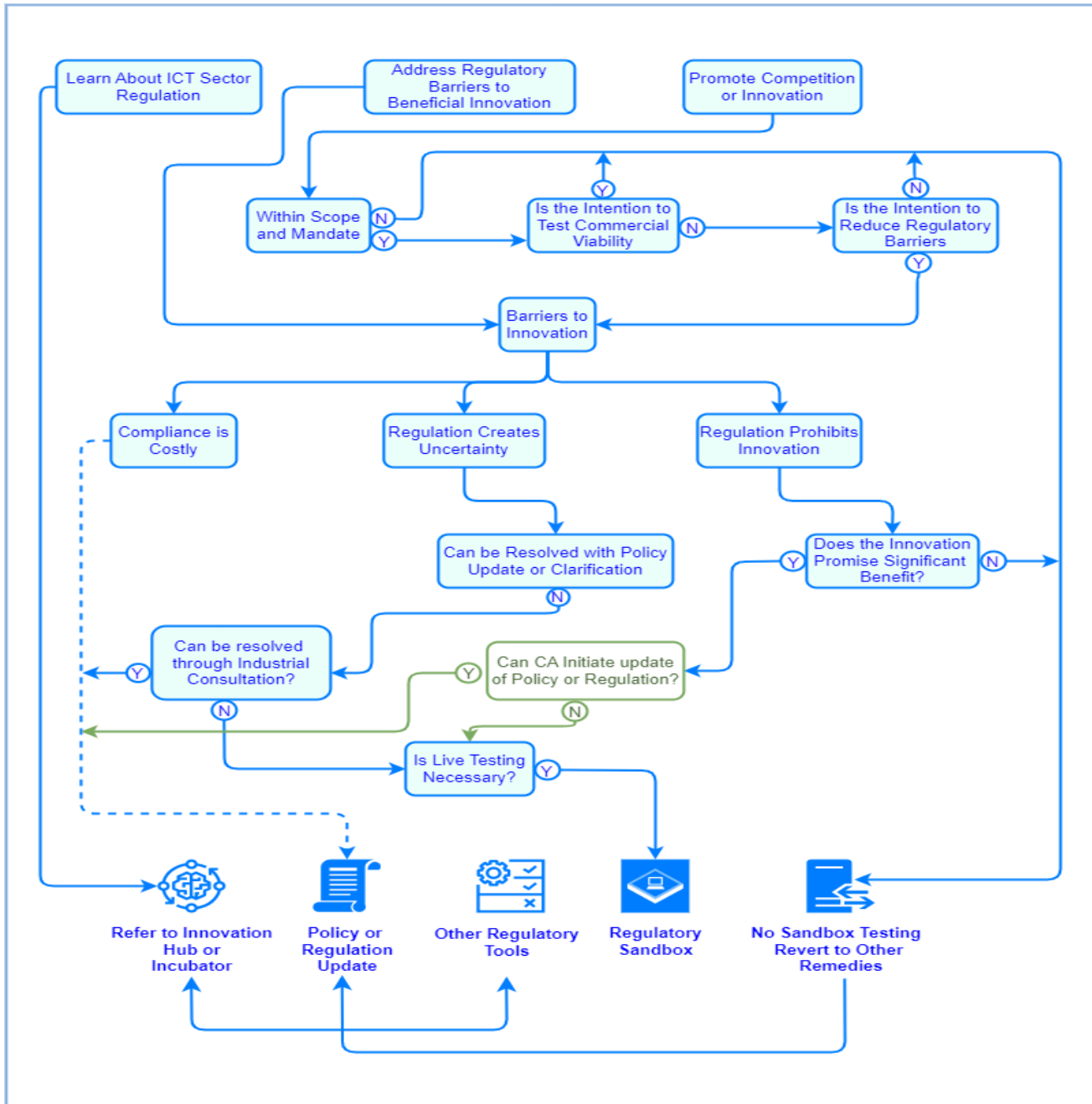
An innovation testbed or hub is an initiative to help startups and large companies leverage intellectual capacity to nurture new ideas, generate business models and concepts, and develop new technologies. Innovation testbeds facilitate collaboration between various agents, companies, and authorities in an environment where there is a vast exchange of information, knowledge, and strategies to develop joint solutions or new technologies.

A regulatory sandbox is not an incubator for innovation.

Solutions that enter the regulatory sandbox should be market-ready and control tested; when they enter the sandbox, the focus is on whether the new technology or solution will fit into the existing regulatory framework and what regulations need to be adjusted to meet this new solution.

A regulatory sandbox is a specific type of innovation test bed where the control element is the regulatory conditions. All regulatory sandboxes are innovation testbeds, but not all are sandboxes.

Fig 1: Regulatory Sandbox Decision Process¹



¹ Jenik, Ivo and Schan Duff. 2020. How to build a regulatory sandbox: A practical guide for Policymakers. CGAP ↑

3. BACKGROUND

Regulators globally are increasingly embracing the regulatory sandbox to provide a dynamic, evidence-based regulatory environment to test new services, products, and emerging technologies that do not easily fit in the current regulatory framework. The rapidly changing regulatory and service industries, driven by new technology, are transforming markets. Through new business models and new players, some from outside the traditionally regulated sectors challenge existing business practices and norms and leverage technology for consumer-centric products and services, offering alternatives to incumbent service providers and bringing services to previously underserved populations.

These changes have increasingly led regulators to question whether their approaches to regulation and supervision remain adequate for the changing regulatory environment. COVID-19 and the resulting challenges have aggravated this situation, necessitating technology to address these issues. While not a “one-size-fits-all” solution, the regulatory sandbox can guide regulation toward embracing emerging technologies and services and create a dynamic, evidence-based regulatory environment from which the Authority can learn.

3.1. Policy Considerations

Digitalization and technical advances have propelled development to unprecedented levels, bringing to the forefront the potential of innovation and forward-looking solutions, which have great potential to accelerate the achievement of the global development agenda through the 2030 Sustainable Development Goals. The rapid scaling and evolution of digital technologies present new risks, threatening the very development of governments and end-users; threats such as data breaches, digital fraud, privacy, and cybersecurity could undo all efforts.

The increased uptake and use of frontier technologies can further widen the digital divide, leaving behind the unconnected and digitally illiterate, which has a cascading impact on social, economic, and digital cohesion. A deliberate policy and regulatory framework must be needed to accelerate digitalisation, supported by institutional arrangements and collaborations that spur growth while mitigating risks.

The drafting of policy and regulatory positions that promote digital transformation; Kenya has made made declarations in ICT Policy that supports the establishment of a sandbox. One of the great imperatives of regulatory sandboxes is the commitment of policymakers and implementers; when embarking on sandboxing, clear leadership within government and inter-agency cooperation are critical to reaping the learnings and growth. A highly involved, cooperative, and collaborative approach will allow for more informed and evidence-based policy and regulatory decisions.

Regulatory sandboxes are intended for novel technology and solutions whose success would broadly serve the public interest and economic growth. They provide policymakers and regulators with valuable lessons that may help shape new laws and regulations. Using a structured and interactive process of information sharing drives transparency and promotes agility. Regulatory sandboxes differ in how their learnings are applied to policy, from the Authority directly triggering a pre-legislative consultation on a specific regulatory change to providing contextual information to the ongoing evolution of policy discussions.

The Authority's capacity to operate a sandbox will strengthen the digital capacity of institutions and regulators. Building an institutional culture of sandboxing across government and agencies could facilitate more open and active dialogues with innovators, increasing agility and responsiveness.

The new technologies, products, and services coming into the market require new tools, including those that expand the regulatory toolbox to include regulatory sandboxes, ethical frameworks, technology roadmaps, regulatory impact assessment, multi-variable research, and big data simulation. Sandboxes can break down policy and regulatory barriers to bringing digital technologies to development, ensuring that digital technologies are inclusive by design from the onset.

3.2. Current Market Structure

The current telecommunications Market structure is based on the Service and Technological Neutrality principle and is, therefore, progressive and more accommodating to implementing new and emerging technologies. It does not, however, make provision for technology sandboxing.

The unified licensing framework (ULF) represents a flexible regulatory strategy, allowing a licensee to provide any communication service under a single license. Removing the need for multiple licenses encourages service providers to expand their offerings, spurs innovation, and ultimately benefits consumers with more choices.

3.2.1. Telecommunications Market Structure

The Authority has adopted a Unified Licensing Framework (ULF) that is technology neutral. Consequently, operators and service providers are licensed under a market structure consisting of the following broad market segments: -

a. International Gateway Systems and Services License

This license allows for the establishment and operation of international gateway systems and to provide international gateway services using satellite communication services across the globe or terrestrial systems across contiguous countries.

b. Submarine Cable Landing Rights License

This license allows for establishing submarine cable systems to provide international connectivity services across the sea.

c. Network Facilities Provider (NFP)

This license category allows a licensee to establish and operate communication infrastructure using any form of technology, whether fiber, copper, satellite, or microwave systems, for use by application service providers to provide services. The resources applicable to this category of license are the spectrum resources. The category is divided into three sub-categories; **Network Facilities Provider Tier 1, 2 and 3.**

d. Application Service Provider

This license allows a licensee to provide any service to end users using the infrastructure leased from any of the above NFP licensees. Such services include but are not limited to voice, data, Internet,

mobile virtual network operators, vehicle tracking services, etc. The services are all communication services except for content services. Resources applicable to this license are numbering resources for customers and network nodes.

e. Content Service Provider

This license allows a licensee to provide content-related services to end users who are customers of the application service providers. Content service providers use the infrastructure of Network Facilities Providers and the systems of application service providers to reach their customers. The services offered by content service providers are of information, entertainment, education, health, social, etc. nature and can either be text, voice, or video clips delivered to a customer's mobile device on request or as subscribed to by the customer.

f. Dot KE Domain Name Registry Services Provider

The dot KE Domain Name Registry services allow a licensee to be the administrative and technical contact for the dot KE domain name registry; administration and maintenance of the dot KE domain name registry, provision of name service for the dot KE domain name registry, and provision of a domain registration system for the dot KE Domain Name Registry.

g. Telecommunications Contractor License

This license allows for the supply, installation, and maintenance of communication infrastructure for third-party infrastructure providers like NFPs, IGS, SCLR, or private network operators. The telecommunications contractor does not own the resulting infrastructure.

h. Telecommunication Technical Personnel Licence

This license is issued to an individual deemed technically qualified to install and maintain communication infrastructure. The license categories include Installation (I), Maintenance (M), Internal Wiring (W), and External Wiring (E), issued depending on the level of qualification of the person. Details are available on the license category

i. Ordinary Communication Vendor Licence.

This license allows for supplying and maintaining low-power communication devices, mainly end-user devices such as mobile phones, set-top boxes, remote devices, tracking devices, etc.

3.2.2. Broadcasting Market Structure

Sound broadcasting services in Kenya are exclusively analogue and mainly FM, apart from a few AM stations in the Medium Wave (MW) bands operated by the public broadcaster. The Kenya Information and Communications Act of 1998 provides a broadcasting market structure consisting of public, commercial, and community broadcasting services and licensed signal distributors.

j. Public Broadcasting Services

The Kenya Broadcasting Corporation Act, CAP 221 of 2009², designates Kenya Broadcasting Corporation (KBC) as the public broadcaster and sets out the Corporation's management, powers, functions, and duties. Its duties, set out in Section 8 of the Act, include “to provide independent and impartial broadcasting services of information, education, and entertainment, in English, Kiswahili, and other languages as the Corporation may decide”.

k. Commercial Broadcasting Services

Commercial broadcasters provide a diverse range of programming that reflects people's identities, needs, and aspirations in their broadcasting area. Where the commercial broadcaster provides national coverage, it is required to provide programming that reflects the identity and needs of the people of Kenya;

l. Community Broadcasting Services

Community broadcasters are established to provide broadcasting services that reflect the needs of a community of people in a specific location, including cultural, religious, language, and demographic needs; deal specifically with community issues that are not normally dealt with by other broadcasting services covering the same area, and provide a particular broadcasting service that highlights community issues.

m. Signal Distribution Services

The signal distribution services involve the accommodation of broadcasters' content on the signal distributors' platform to transmit to the end-users. Currently, there are two common carrier signal distributors, one public operator and another private operator. There are also three self-carry operators.

3.2.3. Postal and Courier Market Structure

a. Exclusive Services

Exclusive services in the postal sector are provided by the Postal Corporation of Kenya (PCK), designated as the Public Postal Licensee and the body charged with providing universal postal services. To fulfil the Universal Service Obligations (USO), PCK has been granted exclusivity for certain services (reserved services).

b. Competitive Services.

Both the Postal Corporation of Kenya (PCK) and other courier operators provide these services: Courier services, Parcel services, direct mail marketing services, audience-customer communication, Postal financial services, Electronic and hybrid mail services, Distribution of publications and Agency services.

- i. Public Postal Operator: Responsible for USO and has the widest International and domestic coverage (networks).
- ii. International Operators: Operate internationally with worldwide and domestic networks

² Kenya Law Reform Commission (2009) Act No: CAP. 221. Act Title: KENYA BROADCASTING CORPORATION
<http://kenyalaw.org:8181/exist/kenyalex/actview.xql?actid=CAP.%20221>

- iii. National Operators: Operate within the domestic nationwide market.

3.3. Legal and Regulatory Framework

3.3.1. Situating the Sandboxes within the Legal & Regulatory Framework

Under the Kenya Information and Communications Act, KICA, 1998, as amended, the major reference concerning innovation or research focuses on Radiocommunications, as cited below:

37. Licenses for scientific or research use

(1) Where an application for the grant or renewal of a radio communication licence is made to the Commission by any person, and the Commission is satisfied that the purpose of the licence is to enable the applicant to conduct experiments in radio communications for the purpose of scientific research, the Commission shall subject to subsection(2) not refuse to grant or renew the licence, and shall not revoke the licence when granted and no sum shall be payable under any regulations in respect of such licence except the fee for the grant or the renewal thereof.

(2) Nothing in subsection (1) shall prevent the Commission from refusing to grant or renew, or from revoking, a radio communication licence if the applicant has, whether before or after the grant or last renewal of the licence, been convicted of any offence under this Act, whether in relation to any radio communication apparatus covered by such licence or any other radio communication apparatus or has been convicted of using any apparatus for the purpose of interfering with any radio communication.

(3) Nothing in subsection (1) shall limit the discretion of the Commission as to the conditions which it attaches to any radio communication licence or its power to vary the conditions of any such licence. [L.N. 39/1999.]

There is a need for amendments to be introduced to accommodate non-spectrum-related innovation or research. Nevertheless, *there is no hindrance* to the sandbox being established to support scientific research or trials for new and emerging technologies and services. This will enable firms, start-ups, academia, and individuals to test their innovative ICT solutions, products, technologies, or services on the market under specific regulatory conditions for a specific period prescribed by the Authority. This is significant because:

1. Embedding the concept of Regulatory Sandboxes in law can provide a clear, legal basis for their operations. It can clarify all stakeholders' roles, responsibilities, and boundaries for all stakeholders involved.
2. By allowing for an Authorization Certificate, the authority will promote scientific research and the trial of new and emerging technologies. This can help foster innovation in the ICT sector.
3. This proposal will help the Authority address any legal uncertainties surrounding the operation of new and emerging technologies.
4. By tying the sandboxes to specific legal provisions, regulators can better oversee the activities within the sandboxes.
5. Potential for International Alignment: If other countries adopt similar legislative strategies for their ICT sectors, there may be the potential for international cooperation and alignment.

3.3.2. Regulatory Relief and Safeguards

Regulatory Sandbox tests shall incorporate appropriate safeguards to identify and manage potential risks and mitigate the consequences of failure, such as the unknown risk of financial loss or other undisclosed risks to customers, investors, market participants, and the Kenya ICT markets. Participants shall comply with specific minimum regulatory requirements prescribed by law and applicable to all licensees of the Authority, as further specified by the Authority in a safeguard and supervision plan (a “Safeguards Plan”), which forms a part of the test plan. In the Safeguards Plan, the Authority will also determine the specific regulatory requirements it is prepared to temporarily modify during a Regulatory Sandbox test on a case-by-case basis, subject to the safeguards described below.

To the extent a Participant already operates in Kenya under a licence issued by the Authority, the terms and conditions of that licence would continue to apply during the test to all non-sandbox-approved activities. The Regulatory Sandbox would, however, permit a specified product, solution, or service to be tested by the licensed entity following the provisions of a Test Plan and without requiring a separate or modified licence for purposes of the test.

The Authority may, in addition to any other enforcement action, revoke or suspend an approval to participate in the Regulatory Sandbox at any time before the end of the testing period if the Participant:

- (a) Fails to implement any required safeguards;
- (b) Submits false, misleading or inaccurate information, or has concealed or failed to disclose material facts in the application;
- (c) Contravenes any applicable law;
- (d) Is undergoing or has gone into liquidation;
- (e) Breaches data security and confidentiality requirements;
- (f) Carry on business in a manner detrimental to customers, investors, or the public at large;
- (g) Fails to effectively address any defects, flaws or vulnerabilities in the product, service or solution which give rise to recurring service disruptions or fraud incidents; or
- (h) Any other reason determined by the Authority.

Any decision by the Authority to suspend or revoke approval to participate in the Regulatory Sandbox shall be in writing and detail the Authority’s reasons for terminating or revoking the approval. Before making this decision, the Authority shall allow the Applicant to be heard.

The Participant may voluntarily seek revocation of their approval to participate in the Regulatory sandbox, subject to clearly demonstrating how it has addressed the interests of existing clients or investors to the satisfaction of the Authority.

The Authority reserves the right to delay or defer acceptance of otherwise qualified Applicants for any reason, including, among other things, limitations on its current or anticipated supervisory capacity, the anticipated burden of planning and supervising the sandbox test, or any other reason that may affect the quality, effectiveness, or impact of the proposed Regulatory Sandbox test.

Any decision by the Authority to deny admission to the Regulatory Sandbox shall be supported by a written statement to the Applicant stating the Authority’s rationale for denying the application.

4. ELIGIBILITY

The target applicants for admission to the regulatory sandbox are organisations (local or international), including incubators, willing to enter into an agreement and provide innovative technology solutions on a pilot basis, subject to the Sandbox criteria laid down in this framework. The focus of the Sandbox Framework will be to encourage innovations intended for use in the ICT space in areas where the proposed innovation shows promise of easing/affecting service delivery significantly, promoting the growth of the ICT sector, and promoting competition in the sector.

The application should contain supporting information to explain how the sandbox evaluation criteria listed below can be fulfilled:

1. **Innovation:** “Is it a genuine innovation?” The proposed service/solution includes new or emerging technology or innovatively uses existing technology. For example, secondary research should show that few or no comparable offerings are available.
2. **Consumer benefit:** “Is there a consumer benefit?” The proposed service addresses a problem or benefits consumers and industry. This contention could be supported by evidence from relevant consumer or industry research.
3. **Need for a Sandbox:** “Is there a need for a sandbox?” Establishing the need to sandbox using the decision-making process.
1. **Test readiness:** “Is the innovation ready to be tested?” The test scenarios and expected outcomes of the sandbox experimentation should be clearly defined, and the sandbox entity should report to the regulatory authority on the test progress based on an agreed schedule.
2. **Consumer protection:** “Is this innovation secure by design?” The appropriate boundary conditions should be clearly defined for the sandbox to be meaningfully executed while sufficiently protecting the interests of consumers and maintaining the safety and soundness of the industry.
3. **Risks and mitigation:** “Does it entail any risk?” Significant risks arising from the proposed service should be assessed and mitigated. For example, providing evidence of preliminary testing of the proposed service as part of the sandbox application, identifying the risks discovered from the preliminary testing and the proposal for mitigating the risks; and
4. **Exit strategy:** An acceptable exit and transition strategy should be clearly defined from the onset, exploring various outcomes that would lead to the exit.

4.1. Requirements

The Regulatory Sandbox is available to an Applicant who has its company incorporated in Kenya or is licensed by an ICT market regulator in an equivalent jurisdiction; and intends to offer an innovative product, solution, or service in Kenya following a successful exit from the Regulatory Sandbox.

An Applicant may apply to participate in the Regulatory Sandbox at any time. The Authority shall review applications on a rolling basis. An Applicant shall submit to the Authority the following documents -

- a. Completed application form as set out in Annex II;
- b. Certified copies of all registration documents;

- c. Certified list of directors, if applicable;
- d. Certified details of the proprietors/founder(s) if the applicant is not an incorporated company;
- e. CVs for all founders and key management personnel;
- f. Outline the business model for the product, solution, or service, which should include:
 - The potential benefits of the proposed product, solution or service for any of the sub sectors regulated by the Authority in Kenya;
 - Why a Regulatory Sandbox test is required;
 - Evidence that the product or service is sufficiently mature to be tested in a live environment, or a sound rationale for admission where the product is not ready for testing;
 - Evidence that the Applicant has adequate arrangements to support live testing, including measures to protect the interests of consumers and other licensees if the test fails;
 - The potential risks resulting from the Regulatory Sandbox test.
- g. The Applicant shall also submit a projected plan and clear strategy for exiting the Regulatory Sandbox, which shall include:
 - Scenarios for transitioning and/or compensating customers in the event the proposed product, solution or service is discontinued; and
 - Proposals for deploying the product, solution or service on a commercial scale in Kenya after a successful exit from the Regulatory Sandbox;
 - A draft sandbox testing plan.

On receipt of an application, the Authority shall communicate with the applicant within fourteen working days.

The Authority shall evaluate the application, and for successful applicants, the Authority shall issue a letter of approval to participate in the Regulatory Sandbox. Once granted approval, the Participant shall be considered an authorised person/entity in line with the KICA,1998, and attendant regulations.

4.2. The Sandbox Process

Once an initiative and/or an innovative solution have been identified or proposed, the technical Committee will decide on the feasibility of the initiative and/or the validity of the proposals made by local and international organisations, including incubators. Once agreeable, an invitation for expressions of interest will be issued to either local and international organisations, incubators, or both, following which the Technical Committee will carry out a screening to check the eligibility of the participants and eventually select one or more Service providers to operate under the Sandbox Framework. The Innovators will be allowed to operate under the Sandbox Framework and develop a prototype of the innovative solution to be tested on a pilot basis.

The screening and selection of the service provider phase may last four weeks from the closure of the application window (where applicable). The Technical Committee shall receive and evaluate the applications against set eligibility criteria. It should be ensured that the applicant(s) clearly understands the objectives and principles of the Sandbox Framework and conforms to them.

4.3. Test Plan

1. An Applicant shall submit to the Authority a test plan with information on
 - a. Key test objectives (including the specific regulatory questions or hypotheses to be tested in the Regulatory Sandbox);
 - b. Testing metrics and/or performance indicators;
 - c. Testing methodologies;
 - d. Scope and testing parameters (e.g., number and/or kind of investors and/or test market);
 - e. Proposed testing period;
 - f. Relevant reports to be submitted during the testing period and feedback mechanisms;
 - g. Safeguards and remediation measures.
2. The Authority shall review and approve the test plan with such modifications as may be necessary.
3. During the testing period, the Authority may require modifications to the test plan as necessary to ensure that the test objectives are met or to protect investor interests. The Participant may modify the test plan with the Authority's approval.
4. The initial testing period shall be determined through consultations between the Authority and the Participant. The testing period shall not exceed twelve months unless the product, solution, or service has tested positive. It can be demonstrated that extended testing is necessary to respond to specific issues or risks identified during initial testing. Any extension shall not exceed a further twelve months. Extensions will be based on justifiable reasons. However, it will not always be an available option. An extension will be issued on a case-by-case basis based on the request of the sandbox entity.

5. REGULATORY SANDBOX FRAMEWORK

5.1. Establishing a Regulatory Sandbox

Involves a few steps in coordinating the interaction between the regulator, ICT innovators, and other stakeholders. The stages involve designing and conceptualising the regulatory sandbox, establishing clear operational parameters, and a post-implementation analysis and considerations.

The conceptualisation and design of the sandbox are critical in that they set the tone concerning transparency, eligibility, stakeholder collaboration, and resource capacity. The governance framework and the institutional structures will greatly influence the objectives of the regulatory sandbox and inform collaboration and stakeholder engagement. The Authority has conducted stakeholder engagements and collaborated with other regulators. The regulation and use of digital technologies is a cross-cutting function of various sectors of the economy; digital technologies are also vertically integrated; the regulator, therefore, needs to adopt a collaborative approach to sandboxing where it can leverage resources and insights from other regulators.

Once the stakeholder and collaborative frameworks have been designed, the team's capacity and resources can be explored among all stakeholders and regulators. The sandbox requires significant resource commitment due to the nature of the operations and the oversight required by the Authority. Lastly, in the conceptualising phase, the Authority has explicitly set out the eligibility criteria and the timeframes for application processes, participation in the sandbox, and exiting the sandbox.

Once the sandbox concept has been designed, validated by stakeholders, and approved, the Authority shall operationalise the regulatory sandbox. Bearing in mind the objectives of the sandbox in collaboration with stakeholders, the Authority is ready to kick-start the application process. The submission and evaluation of applications must be transparent and publicly communicated to hold both the participants and the Authority accountable. Once the participants have been selected and begin sandboxing, the Authority is responsible for guiding and providing oversight to the participants throughout the sandboxing period, constantly and consistently. During this period, the authority will also be in constant contact with external and internal advisors who are subject-matter experts; at this point, the Authority could very well also be gaining insight and knowledge from observing. The strength of the collaborative framework is tested in this phase, as it may be necessary to form a multi-regulator team to oversee the sandbox, in which case clear memoranda of understanding need to be in place.

The last phase, and the most critical for knowledge transfer and meeting the primary objective of the regulatory sandbox, is the post-implementation considerations. The participants in the sandbox would have agreed before starting how to exit the sandbox, and all the deliverables on findings would be shared with the regulator. The Authority will also analyse the collected data and structure its learnings and insights. The outcomes would be communicated with all relevant stakeholders, and any changes that need to be made to the existing regulatory framework would be premised on the outcomes report of the sandbox.

5.2. Regulatory Sandbox Design

The design of a regulatory sandbox begins with a thorough needs assessment linked to the program's overall objectives. The assessment helps identify required resources, align internal and external stakeholders and highlight complementary regulatory bodies. The feasibility assessment should confirm institutional commitment to the sandbox by identifying an executive sponsor and a tentative governance structure. A key critical success factor for a regulatory sandbox is the Authority's Ability to demonstrate commitment at the highest level. The table below illustrates some of the key elements of regulatory sandbox design that can be applied to achieve the design requirements of a regulatory sandbox.

The following main areas of the sandbox design have been considered as these directly impact the sandbox's success and efficiency; conceptualisation included analysing the following main areas:

1. Governance structure of the sandbox
2. Team capacity and resources
3. Regulatory collaboration and stakeholder engagement
4. Regional and international harmonisation
5. Eligibility criteria – who can participate
6. Validity period
7. Safeguards to be in place for participants and the regulator
8. Sandbox exit

5.3. Team Capacity and Resources

The operationalisation of a regulatory sandbox is widely considered demanding on both the time and skills required of the implementing regulator. The operations of a regulatory sandbox require a dedicated team responsible for the operations, including evaluating application forms, assessing complex innovation, testing plans and performance metrics, and supervising the Sandbox participants, all while keeping abreast with technological developments within the sector. The resources operating the sandbox are also responsible for keeping the stakeholders updated on the operations of the sandbox.

Before the establishment of the sandbox, the first consideration must be to assess the existing resources, their availability, and their capability to run the operations of the Sandbox. If the sandbox is part of a cross-sectoral collaboration between regulators, resourcing could be established with a the dedicated cross-functional team for the sandbox operations. Stakeholder management is an important relation to uphold throughout the existence of the sandbox; however, this function can be resource intensive as it requires periodic communication, oversight, and supervision of stakeholders.

The most common model for resourcing and staffing the sandbox is to have a small number of fully dedicated staff members running the sandbox operations. This dedicated team of resources is then supported by additional policy, legal, and technical subject matter experts working in the Authority's other departments. The dedicated staff that work on the sandbox need to be subject matter experts as well, and not just carrying out an administrative function as this would soon become an additional

burden on the support staff in the Authority who would need to divide their efforts between their primary role at the Authority and the sandbox³.

The regulatory sandbox staff deeply understand digital technologies, the ICT sector, and its business models; further, they understand the underlying varied sector-specific applications and use that might require sandboxing. The Authority has access to, amongst others, the following areas of expertise, internally or through its network of stakeholders:

1. National and International Policy Expertise.

The Communications Authority of Kenya works to develop guidelines and engage stakeholders to implement and monitor the sandbox. This is by providing guidance and oversight through regular reporting and meetings.

2. Digital Technology / Digital Engineering Expertise

The Authority is committed to supporting the realisation of Vision 2030. The Authority facilitates rapid growth of the ICT sector in support of the realisation of the Government's Big 4 Agenda by fast-tracking ICT-related regulatory and universal access initiatives. As stated in the strategic plan, the Authority is geared to manage ICT regulatory resources, Ensure Efficient ICT Markets and also Ensure Sustainable Development of the ICT.

3. Cybersecurity and Consumer Protection

The Authority has a Cyber Security department which ensures the security of the Authority's information. It enables timely and effective detection, prohibition, prevention, response, investigation and prosecution of computer and cybercrimes and facilitates international cooperation in dealing with computer and cybercrime matters.

The sandbox provides an evidence-based tool for fostering innovation while remaining vigilant over consumer protection and maintaining market stability, among other risks. The Framework ensures sufficient privacy and consumer protection safeguards in deploying new technologies and services.

4. Data Analytics

To foster digital experimentation, the top trend worldwide is towards implementing models like the regulatory sandbox, which provides room for experimentation while guiding regulation toward embracing emerging technologies. The regulatory sandbox provides a dynamic, evidence-based regulatory environment to test emerging technologies such as the Internet of Things (IoT), big data analytics, artificial intelligence (AI) and Over-the-Top (OTT) services.

5. Innovation and Future Studies

It is important that the dedicated team and all regulators involved in the regulatory sandbox keep up-to-date with the fast-growing developments within digital technologies and other technology-driven sectors. It is also highly recommended that the team dedicated to the

³ Jenik,Ivo and Schan Duff. 2020. How to build a regulatory sandbox: A practical guide for Policymakers. CGAP

sandbox capacitate themselves extensively through peer learning with other regulators or specialised skill programme⁴.

5.4. Regulatory Collaboration

The Authority has hosted the Emerging Technologies Sandboxes; however, the cross-cutting and enabling nature of ICTs made it necessary to collaborate with other regulators. Coordination with stakeholders is through a memorandum of understanding, a joint committee, or an information exchange. A procedure has been established to cover the instances where a sandbox applicant or participant falls under the mandate of a different regulator.

5.5. Stakeholder Engagement

This is an important aspect of the regulatory sandbox design and implementation; it has required the Authority to engage three main groups of stakeholders, i.e. the market participants, internal stakeholders, and peer regulators.

The market participants' consultation process covered two sandbox aspects. In collaboration with other participating regulators, the Authority shall engage the market participants to understand the nature and scope of innovation activities and the need for regulatory modernisation.

The Authority has documented the market trends, technologies and regulatory shortcomings in the existing frameworks; the Authority consulted the marketplace on the sandbox design, which has ensured minimal barriers to participation for future participants. The design element consultation covers application fees, protection of intellectual property shared during the testing, the sandbox's intended purpose, and eligibility criteria. Clarifying the purpose of the regulatory sandbox during this consultation process has improved the quality of the application process and helped avoid wasting time and resources in a process intended to deliver regulatory outcomes and not commercial advice or capital investment.

5.6. Extensions

Before the termination date of the sandbox, the participant could apply for an extension based on a justifiable reason. However, it is not always an available option. An extension will be issued on a case-by-case basis based on the request of the sandbox entity. The duration of the extension can be set according to a restriction in length or be milestone-driven⁵.

6. RISKS AND CONSIDERATIONS

Implementing a regulatory sandbox has some limitations and risks, which could result in adverse consequences for the consumer. As the Authority's primary mandate is generally to protect the consumer, these risks must be mapped and mitigated as far as possible. These risks need to be identified and borne by the regulator, as well as the sandbox players. Therefore, these risks must be constantly monitored and considered from conceptualisation, operationalisation, and finally, at reporting and exiting the sandbox.

⁴ A proposed Regulatory sandbox Framework for Africa. Policy Impact Partners and Pygma Consulting. 2022

⁵ <https://digitalregulation.org/a-case-for-ict-regulatory-sandbox/#post-3004491-footnote-46>

Table 1. Risk Vs Benefits analysis

Benefits	Challenges	Risks
<ul style="list-style-type: none"> ● Reduced time to market ● Reduce regulatory uncertainty ● Build regulatory capacity ● Stimulate investment ● Multi-regulator collaboration 	<ul style="list-style-type: none"> ● Data Privacy ● Consumer protection ● Confidentiality 	<ul style="list-style-type: none"> ● Collusion between industry and market participants ● Regulatory Capture ● Negatively Impact Competition ● Uneven playing field for all involved

6.1. Benefits

The potential benefits of a regulatory sandbox include the following⁶ but are not limited to

Table 2. Potential benefits of Regulatory Sandboxes

Reduced time-to-market	Uncertainty and delays in regulatory landscapes adversely affect the first movers of innovation; the successful testing that can result from participation in a regulatory sandbox reduces the overall time to introduce products in the market.
Better access to funding and investment	Most digital innovation heavily relies on investments, especially in the form of equity. Innovation attracts lower valuations as investors factor in the risk of clarity in regulation and compliance risk. Sandboxes facilitate ease of investment as product viability and regulatory compliance have been tested.
Facilitates more innovative products.	Regulatory uncertainty can pose a barrier to entry for innovators, as testing in live markets can be expensive. The sandbox framework provides comfort in managing regulatory risks during the testing stage.
Reduces compliance costs.	Compliance costs can be a deterrent to startups and small enterprises. Sandboxes serve as accessible launch pads for safe testing within the legal and regulatory barriers but are free from the burden of commercial competition.
Regulatory clarity	The sandbox is a collaborative effort between the Authority and the participants, facilitating discussion on the various outcomes of the sandbox experimentation. This helps regulators and the participants understand the potential future regulation changes.
Little Failure Consequences	The sandbox environment allows participants to test out its product whilst ensuring the impact of product or service failure is minimal on consumers. Customer protection also ensures that no major leakage happens during the testing phase.

⁶ Regulatory Sandbox. Making India a Global Fintech Hub. July 2017. – <https://www.deloitte.com/content/dam/Deloitte/in/Documents/technology-media-telecommunications/in-tmt-fintech-regulatory-sandbox-web.pdf>

6.2. Major Risks

The Authority may encounter while implementing the regulatory sandbox.

- Limited human capital to run and manage the operations of the regulatory sandbox efficiently and effectively.
- Poor selection of sandbox participants due to the limited technical capacity of the Authority to assess the technology underlying the innovation.
- Lengthy period required for the Authority to review regulatory instruments.

6.2.1. Unfair Competition

Participants of the sandbox may enjoy some regulatory and compliance relief for certain aspects of compliance due to the waivers and relaxed conditions of the sandbox. Compliance can be costly for licensees, which is a strong incentive to participate in a sandbox. The Authority has ensured no perception of unfairness from those not participating in the sandbox.

The sandbox participants receive guidance and advice from other stakeholders that advance their innovation and could create the perception of anti-competitive practices where the Authority enhances one player's market potential to exclude those who do not participate.

To address negative perception, the Authority shall enhance transparency around the following key areas:

1. Sandbox objectives
2. Eligibility criteria,
3. Awareness and promotion about the sandbox operations, and
4. Separating functions within the Authority demonstrates objectivity in the market and competition-sensitive innovations.

6.2.2. Reputational Risks

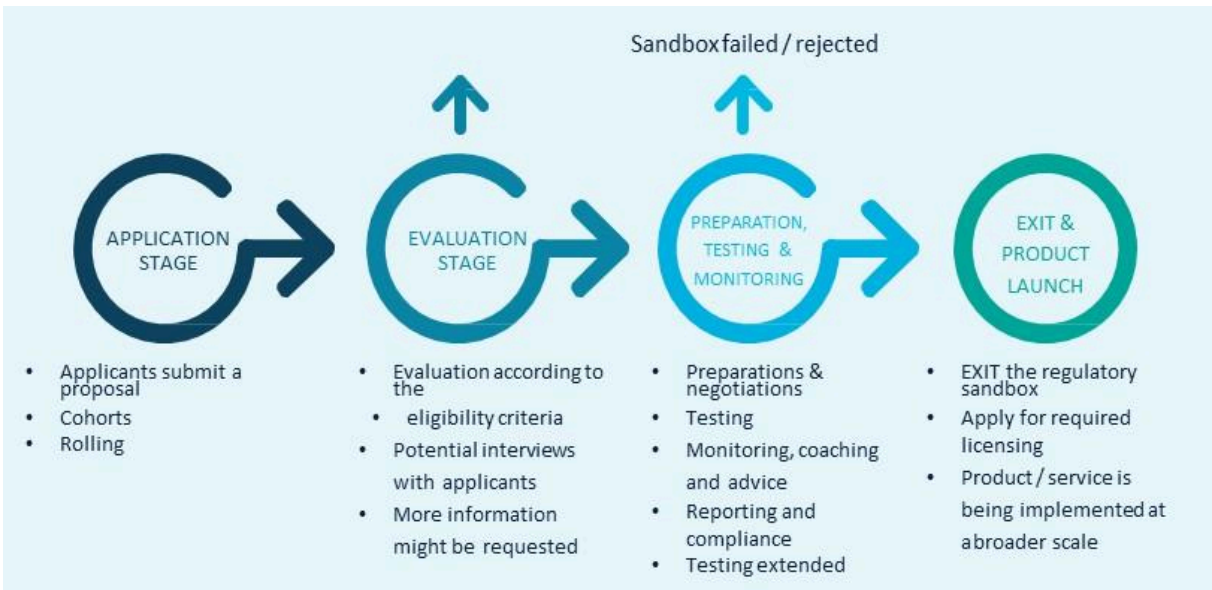
A restrictive regulatory framework may thwart innovation and participation in the sandbox and may result in the Authority not assessing the applications appropriately and thus rejecting more applications or not approving the right kind of innovation to realise the growth envisioned.

Another risk arises with liability on the Authority's part in case failed tests harm customers and other market participants, which could be perceived as poor supervision by the Authority and threaten stakeholder and customer trust in the sector.

7. IMPLEMENTATION OF THE REGULATORY SANDBOX FRAMEWORK

The Authority has developed modalities for Implementing the sandbox from the application process through to the exit of the sandbox. The chart below depicts the stages of the operation of the regulatory sandbox.

Fig 3. Regulatory Sandbox Process Chart⁷



7.1. Application Stage

The Authority has implemented a hybrid model for processing applications:

- **Cohorts:** The Authority may run a themed invitation or “Invitation to Apply” approach, where an invitation is issued periodically based on specific segments/categories..
- **Rolling:** The Authority will maintain an open application window; under which applications are accepted throughout the year, and applicants are welcome to submit applications anytime.

Application forms are used to maintain consistency in the regulatory sandbox application process by; supporting the Authority in determining whether the innovation is eligible for testing in the sandbox; and serving as the participants' commitment to the sandbox parameters. Every application is to be evaluated against the regulatory sandbox’s framework.

The Authority has published guidelines for applicants to follow while completing the application form. These guidelines provide examples of the positive and negative indicators of each section of the form. The application form has the following key sections:

⁷ <https://digitalregulation.org/wp-admin/post.php?post=3004491&action=edit#post-3004491-footnote-34>

KEY ELEMENT	RATIONALE
Introduction	The Authority has provided a general description of the main objectives of the sandbox, the target audience, and general rules for applying to participate in the sandbox.
About the applicant/ applicant details:	The applicant must submit information about themselves, the business's name, location, and contact information. In addition, the applicant must provide information if the applicant's business is active in the country of residence or in another country. Collaboration with any other business is also mentioned in this application section.
The Innovation	This is the most important section of the application form, as the evaluation by the eligibility criteria is largely based on this section. The applicant is required to describe how the proposed innovation is considered genuine, with consumer benefit, ready to be used, and requires the support and services provided by the regulatory sandbox.
Testing Plan	In this section, the applicant is to explain the details and the principal elements and parameters of the testing plan, including but not limited to the cases to be tested, the main objectives, and key success and failure indicators. This section should clearly articulate the KPIs, testing timeline, milestones, consumer benefit, safeguards and exit plan.

Source: *Guide for Implementing Regulatory sandboxes*⁸

7.2. Evaluation Stage

The Authority has, for transparency, established an evaluation committee to assess all submitted applications. The committee has to review the applications against the pre-defined eligibility criteria. The scores and weights of each criterion will be set by the regulators and published in the application guiding document.

During the evaluation process, the committee has the right to call the applicant for a presentation/interview to discuss further the innovation, its business model, and product offerings to understand better the need for 'sandboxing'. The applicant may review and modify the application and resubmit at the regulator's discretion.

It is essential that the evaluation and approval process is time-bound and that this is adequately communicated in the guiding document. This has ensured that the Authority has sufficient capacity and is well-resourced to deal with the complexities of various innovations. Applicants are set to be informed about the Authority's decision within twenty-one (21) days of the submission.

⁸ Guide for Implementing Regulatory Sandboxes for Innovative Finance:
<https://www.euneighbours.eu/sites/default/files/publications/2020-12/MED%20MSMEs%20Programme%20-%20Regulatory%20Sandbox%20Guide%20-%20Nov.%202020.pdf>

Similarly, after approval, the applicants will be prescribed the time frame to start testing the innovation.

7.2.1. Preparation Stage

Once the applicant has successfully passed the evaluation phase and been approved for testing, the applicant now becomes a participant in the regulatory sandbox. Before the commencement of testing, the Authority and the player will work together and co-create the sandbox plan that should cover the topics shown in Figure 5 below.

Table 3: The sandbox plan⁹

Policy Engagement	<ul style="list-style-type: none"> ● Engage with regional peers for policy alignment through regional policy bodies ● Develop a regional standard for digital transformation through regional bodies
Consultation	<ul style="list-style-type: none"> ● Thematic workshops, roundtables, public consultation and validation workshops ● Conferences, regional learnings, training
Collaboration	<ul style="list-style-type: none"> ● Collaboration with other sector regulators through regional regulatory associations ● Collaboration with marketplace and innovation hubs ● Cooperation agreements, MoUs etc.

7.2.2. Testing and Monitoring Stage

During this stage, the Authority upholds the parameters of the agreement by ensuring that the player only tests the innovation according to the agreement. Per the agreement and sandbox plan, the Authority provides direct supervision and mentorship to the regulatory sandbox participants in collaboration with the relevant stakeholders. Ideally, each participant will have an assigned officer to ensure that appropriate safeguards are implemented and there is no breach in any pre-agreed parameters.

The dedication of an assigned officer ensures that the Authority can provide guidance and oversight as the testing continues. It also means that continuous monitoring would allow for corrective actions, solutions, and interventions promptly. The officer may also identify required waivers not pre-conceived in the sandbox plan or agreement.

7.3. Reporting and Approvals

As part of the sandbox plan and the agreement, the sandbox participants must submit interim and final reports to the regulator. This aligns with the objectives, which will assist the Authority in identifying required interventions and support for the sector. The interim and final reports shall cover the information in the table below.

⁹ A proposed Regulatory Sandbox Framework for Africa. Policy Impact Partners and Pygma Consulting. 2022

Table 4: Reporting Matrix

Dispute resolution	Operational aspects	Business aspects
Frequency and nature of incidents/complaints Incident/complaint resolution mechanisms	Operational issues Corrective actions	Active users & frequency of use Qualitative factors

7.3.1. Interim Reports

The sandbox agreement sets the frequency of the interim reports, which is determined considering the testing duration, complexity of the innovation, and risks associated with the test. Interim reports include the following information:

- Key performance indicators, key milestones, and statistical data;
- Key issues arising as observed during the testing period;
- Action required to address the issues;
- Required intervention and waivers by the regulator

7.3.2. Final Reports

As part of the sandbox agreement, sandbox participants are obliged to submit a final report to the Authority detailing all findings, test results and challenges. This report will assist the Authority in improving the regulatory landscape to accommodate similar innovative products in the future. The analysis of findings in final close-out reports forms a critical element in sandboxing as the learning paves the way towards implementing evidence-based general regulations that are evidence-based and informed by technological changes. For example, the Authority can review existing regulations to eliminate restrictions or create new regulations definitively.

A successful test will produce:

- Main outcomes, KPIs, and comparative outcome analysis;
- Customer feedback, complaints, concerns, and challenges during the testing period. Measures are taken to overcome the challenges;
- A detailed description of the technology and network limitations, consumer protection and risk management frameworks;
- A summary of recommendations and findings to the Authority about the testing experience.
- Next steps that both the participant and the Authority can take.

7.3.3. Failed Test Report

In the case of a failed test, the learnings can be critical to the regulator. The report for such instances includes the following information, over and above the points mentioned above:

- Lessons learnt from the test;
- Reasons for failure and how these failures were addressed/determined;
- Customer feedback and response to the innovation.

Table 5: Next steps

	Description	Example
License	The sandbox participant can roll out the innovation in the market in compliance with regulatory requirements.	A successful sandbox participant will be licensed under a licensing regime that is already in place.
Other Formal Approval	The sandbox participant can roll out the innovation in the market in compliance with regulatory requirements subject to exemptions and/or waivers. granted. This also may include a mandatory partnership with a licensed institution.	A successful participant can be granted temporary operations until an appropriate regulation is adopted.
Regulatory change	The tested solution fails under the Authority’s mandate and cannot be permitted without changes in the legal & regulatory framework.	A sandbox framework can allow testing for up to 3 years, which should provide enough time for regulatory changes should they be needed.

8. TERMS AND CONDITIONS

8.1. Regulatory Sandbox Outputs

After the testing period is completed, the Authority takes any of the following decisions:

- Grant the Participant a license or approval to operate in Kenya subject to compliance with existing legal and regulatory requirements or
- Grant the Participant permission to operate in Kenya subject to compliance with the terms of a letter of Authorization;
- Adopt new regulations, guidelines or notices under the relevant section of the Act, based on insights gained from the Regulatory Sandbox test, where there is a need for a broader legal or regulatory reform (for example, the design and adoption of a new regulation to govern a specific class of business model or innovation that is not adequately addressed under existing regulation); or
- Issue a denial of permission for the Participant to operate in Kenya under prevailing legal and regulatory requirements.

8.2. Records and Reporting Requirements

Participants must provide the Authority with interim reports on the progress of the test. The reports identify;

- Key performance indicators, key milestones and statistical information;
- Key issues arising as observed from misconduct, fraud or operational incident reports and, if any, measures taken by the Participant to address such incidents;
- Actions or steps are taken to address customer complaints, emergent risks, or other issues relevant to the Authority's assessment of applicable regulatory requirements;
- Proposed changes to the Participant's key personnel, management, leadership, business plan, or any concerns on financial solvency; and
- Any other relevant matters.
- The frequency and specific details to be included in interim reports shall be agreed upon between the Authority and the Participant, considering the duration, complexity, scale and risks associated with the test.

Participants shall ensure proper maintenance of records during the testing period to support review by the Authority of the testing activities. Participants shall submit a final report to the Authority within thirty calendar days from the expiry of the testing period or within any other period as may be agreed upon by the Authority and the Participant. The final report shall contain:

- Key outcome and performance indicators;
- A full account of all incident reports and resolution of customer complaints; and
- In the case of a failed test, lessons learned from the test; or
- In the case of a successful test, the Participant's plan for the transition of the product, solution or service to a commercial scale.

The Test plans, and all test results shall be treated by the Authority as confidential unless otherwise indicated in this Policy Guidance Note or agreed with the Participant. From time to time, the

Authority may disclose data on and types of firms that have applied to participate in the Regulatory Sandbox.

8.3. Safeguards

The absence of ordinary regulatory parameters and requirements does not invalidate the need for safeguards for all participants in the sandbox, as this can lead to the sandbox being perceived as a means of leniency by other licensees. The following requirements are safeguards that shall be put in place¹⁰:

Table 6: Safeguards and Requirements

Safeguards and Requirements	Description
Fit and Proper Requirements	The participants should demonstrate their ability to perform their roles and properly manage the operations of the tested innovation.
Consumer Protection	“Safety by design” requires the innovation to be built to protect consumers and end-users, ensuring that consumer rights will always be protected.
Quantitative limits	The Authority determines the maximum number of customers for the sandbox test based on each application.
Reporting requirements	A detailed framework on the reporting of the test progression, consumer status, interim results, reporting frequency and methods, amongst others.

8.4. Limitations

Upon being granted the Authorisation to carry on the regulated activity of developing and or deploying technology services within the Regulatory sandbox, the Authority has to impose limitations or conditions on the participant per the Act.

These may include, but are not limited to, any of the following:

- The number and type of customers with or for whom the participant carries on or intends to carry on the approved services within the regulatory sandbox;
- The type and size of customer transactions that the participant is permitted to enter into;
- The suitability assessment and customer's written consent is required prior to carrying on the Regulated Activity of Developing and Deploying Technology Services within the Regulatory sandbox;
- The requirements surrounding the participant’s handling and protection of customer information;
- The manner and type of financial promotion that the participant may undertake and the associated disclosures that the participant is required to make to customers;
- The key information required to be contained in a customer agreement;

¹⁰ Guide for Launching Regulatory Sandboxes for Innovative Finance. Support to an enabling Business Environment for MSMEs Development & Financial Inclusion. 2020

- The prevention of money laundering and countering the financing of terrorism measures that the participant is required to implement;
- The participant’s capital requirements (if any);
- The participant’s financial and other reporting requirements; and
- Any other safeguards to protect the interests of customers or maintain the safety and soundness of the market as the Authority may prescribe. CA may, at any time through the lifecycle of the proposal, by notice in writing to the participant, cancel or vary any condition or restriction imposed on the participant or impose such further condition or restriction as it may think fit.

8.5. Exiting the Regulatory Sandbox

At the end of the one-year validity period, the temporary authorisation for the Regulatory sandbox will expire. The one-year authorisation validity period granted under the Regulatory sandbox may only be extended in exceptional circumstances.

When applying for an extension of the validity period, the participant shall provide the justifications for an extension to the Authority. All applications for an extension of the validity period are to be determined at the Authority’s discretion on a case-by-case basis.

The Authority reserves the right to decline any application for an extension of the validity period if it is desirable to do so to further one or more of its regulatory objectives. Unless an application to extend the one-year validity period is made at least three months before its expiry, or at such time as is otherwise agreed by the Authority, the participant will have to exit the Regulatory sandbox and choose to either:

- (a.) Migrate to the full authorisation and supervisory regime under the current regulatory regime and deploy its technology solution on a broader scale; or
- (b.) Employ an exit strategy.

The exit strategy of a participant may vary according to its commercial needs. For example, the technology participant may choose to cease its business at the end of the validity period or transfer its product and any customers to other authorised institutions.

How participants of the sandbox exit the sandbox is equally important as the details and guidelines on how to enter and participate in the sandbox. To exit the regulatory sandbox, a participant has three options: early termination, scheduled termination, or an extension. Whether or not the sandbox test is successful, these three options can be accessed.

8.5.1. Early Termination

If the sandbox test is successful, this does not mean that the participants’ product or service is immediately allowed into the market. A product/service may be allowed into the market after the Authority has compared it to the regulatory framework and determined that the product/service is market worthy.

Figure 6 below indicates all possible scenarios the Authority uses to determine the market readiness of a product/service.

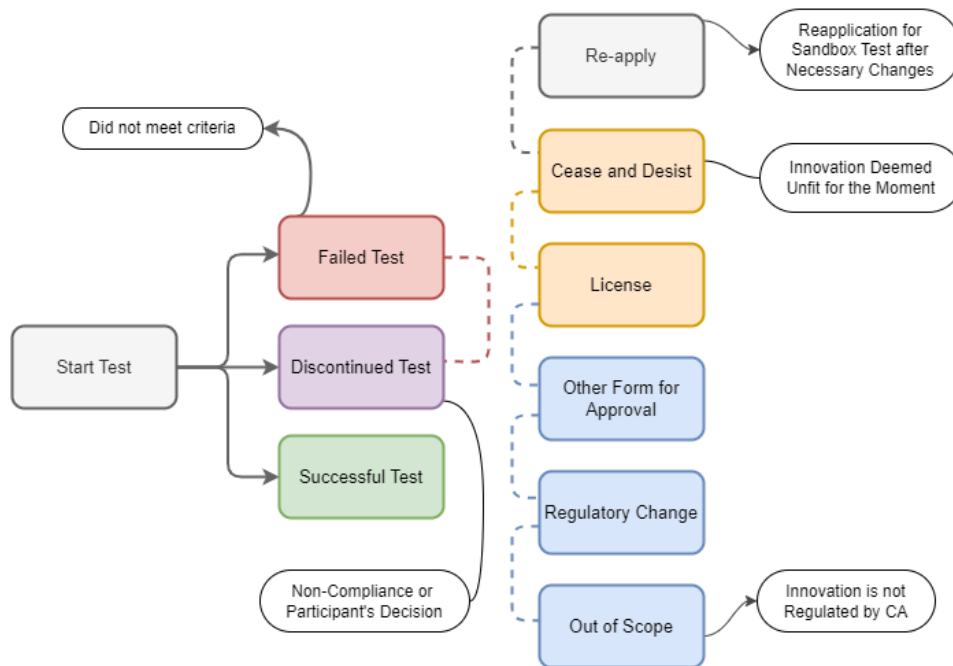


Figure 4 : Exiting a sandbox (Possible scenarios)

8.5.2. Scheduled Exit

This is an automatic process upon reaching the maximum duration within the sandbox and is the ideal scenario for most participants. Further criterion can be attributed to fulfilling any outstanding obligations to customers. The participant will submit the final report to the Authority at this stage. Having reviewed the reports and research insights gathered, the Authority will consider if any changes are required in the existing regulatory regime or if modifications are required based on evidence provided through sandboxing. Part of the objectives of the sandbox is to facilitate a safe and fast entrance to the market for new products and innovations; the Authority, therefore, needs to ensure that post-sandboxing, an enabling regulatory environment for a compliant product launch, is developed. Then, finally, the sandbox participant decides whether to launch the new solution within the frameworks set out below; this is not an exhaustive list of options¹¹

¹¹ <https://digitalregulation.org/a-case-for-ict-regulatory-sandbox/>

8.5.3. Cancellation of Authorization

The Authority reserves the right to revoke authorisations to participate in the sandbox at its reasonable discretion, and subject to providing sufficient reasons to the relevant participant(s) for revocation, should the testing violate specific measures that may be pre-set or identified by the Authority during the testing period¹²

The Authority may cancel the letter of authorisation on the application of the participant if it appears that:

- a. The participant is failing, or is likely to fail, to satisfy the conditions established above; that guarantee qualification to the Regulatory sandbox;
- b. It is desirable to exercise this power to further one or more of the Authority's objectives, including, for example, if:
 - The participant is failing or is likely to fail, to satisfy the authorisation requirements in chapters 5.1 or 6.
 - The participant has infringed the regulations or any rules, guidelines, or standards made by the CA or any other market regulator.

9. Confidentiality

The Authority treats all non-public information received from an Applicant and/or Participant in connection with a Regulatory Sandbox application or test as confidential and proprietary to the Applicant and/or Participant.

The Authority does not disclose such information to third parties unless required by law or allowed in writing by an Applicant and/or Participant. The Authority will enter into a non-disclosure agreement with a participant to further protect the confidentiality of any information shared in connection with a Regulatory Sandbox test.

The Applicant or Participant is responsible for protecting its intellectual property where necessary.

10. Implementation Mechanism

As the Sandbox Framework involves major technical issues, organisational change and financial implications, the implementation mechanism will involve the Sandbox Framework Management Committee (SFMC), consisting of inter-departmental representatives who the Director General shall appoint. The SFMC shall report to the Management Committee

- 1) The SFMC shall meet on a need basis, at least quarterly. When a meeting of the Committee is convened to consider innovation, the SFMC may elect to bring on board a subject matter expert from MDA's, industry, academia or regional or international standard-setting bodies on the terms currently prescribed by the Authority and which may be revised from time to time.
- 2) The SMFC shall take charge of the following:
 - a. Receive and evaluate innovation applications for admission into the sandbox;

¹² <https://digitalregulation.org/a-case-for-ict-regulatory-sandbox/>

- b. Monitor the implementation of test plans and the transition process after the firms exit the sandbox;
- c. Serve as a channel for information sharing, both internally and externally;
- d. Reviewing and informing policy and legislative amendments relating to the products or service innovations arising from the sandbox,
- e. Providing tailored regulatory support and technical advice when required to the Regulatory Sandbox participants; and,
- f. Issue press releases once a firm is admitted/exited.

10.1. Monitoring and Evaluation

The Authority conducts an annual review of the implementation of the sandbox policy framework and develops appropriate internal and stakeholder reporting mechanisms using prescribed templates.

10.2. Review of the Sandbox Policy Framework

This policy framework is reviewed regularly to ensure that it remains relevant and effective in meeting its intentions but, in any case, not later than five (5) years after approval.

ANNEX I. ELIGIBILITY CRITERIA/ CHECKLIST FOR REVIEW OF APPLICATIONS UNDER THE REGULATORY SANDBOX POLICY FRAMEWORK

A. PRE-ASSESSMENT REVIEWS (DOCUMENTS IN SUPPORT OF APPLICATION)			
No.	DOCUMENT REQUIRED	SUBMITTED YES/NO/NA	COMMENT
1.	Duly completed and executed Application Form		
2.	Certificate of Incorporation of Applicant. For listed companies, a letter from the relevant market regulator confirming listing status.		
3.	Company Shareholding information through CR12 or equivalent document		
4.	Copies of Identification Documents (ID/Passport) for shareholders		
5.	Comprehensive Curriculum Vitae (CVs) for innovators, providing academic background, experience areas of interest and any other relevant information		
6.	Outline of the business model for the product, solution or service, including (Innovation providing consumer benefit, genuinely innovative, needing to test, Ready to test and needing to be authorised)		
7.	Projected plan and a clear strategy for exiting the Regulatory Sandbox		
8.	A testing Plan cites the test objective, Testing metrics, Testing methodologies, Scope and testing parameters, and Proposed testing period;		
9.	Identify Risks associated with the product, solution or service; and appropriate Safeguards and remediation measures for the duration of the test <i>*to be developed in consultation between the applicant and the Authority before admission to the sandbox</i>		
B. ELIGIBILITY CRITERIA FOR ADMISSION TO THE REGULATORY SANDBOX			
TEM	CRITERIA	Met. YES/NO	COMMENT
1.	Application has the potential to deepen or broaden the ICT markets in Kenya.		
2.	Innovative ICT product, solution or service is intended for an offer in Kenya following a successful exit from the Regulatory Sandbox		

3.	Regulatory/legal gap. The proposed product, service or business model is not addressed under existing laws and regulations		
4.	Evidence that the product or service is sufficiently mature to be tested in a live environment or a sound rationale for admission where the product is not ready for testing		
C. Comprehensive Requirements in Review of Applications			

No	REQUIREMENT	MET. YES/NO	REMARKS
1.	Has demonstrated ownership and leadership with roles clearly defined		
2.	Has the necessary infrastructure, including equipment and staff, to discharge sandbox activities effectively;		
3.	Financial resources, including any venture funding or potential funding, intended for use to develop and test the product, service, or solution in the Sandbox.		
4.	Application fee of KES 10,000.		

ANNEX II: BUSINESS PLAN GUIDELINE

Please provide a Business Plan separately addressing the following details and any additional information that may be useful in considering your application

1. Executive Summary:

Briefly describe your organisation and the innovation concept, *including an* outline of the business model for the product, solution or service (Innovation providing consumer benefit, genuinely innovative, Needing to test, Ready to test and Needing to be authorised)

2. Business Model

Outline of the business model for the product, solution or service

- a) The potential benefits of the proposed product, solution or service for ICT markets deepening or broadening in Kenya;
- b) Why a Regulatory Sandbox test is required;
- c) Evidence that the product or service is sufficiently mature to be tested in a live environment or a sound rationale for admission where the product is not ready for testing;
- d) Evidence that the Applicant has adequate arrangements to support live testing, including risk mitigation measures to protect the interests of consumers, licensees, investors and other ICT market participants if the test fails;
- e) the potential risks resulting from the Regulatory Sandbox test;

3. Technical Information

Description of the technology and methodology used to offer your product, solution or service and its alignment/ value proposition to the ICT markets

4. Proposed Services

Clearly describe each of the proposed technology/services and the use case to be tested in the Regulatory Sandbox.

5. Test Plan

Description in detail of the testing program with information on;

- a) Key test objectives (including the specific regulatory questions or hypotheses to be tested in the Regulatory Sandbox);
- b) Sandbox testing plan;
- c) Testing metrics or performance indicators;
- d) Testing methodologies;
- e) Scope and testing parameters (e.g., number and/or kind investor and/or test market, aggregate value and/or frequency of transactions, etc.);
- f) Proposed testing period;

- g) Relevant reports to be submitted during the testing period and feedback mechanisms; and
- h) Safeguards and remediation measures
- i) Description of the proposed control program and safeguards for a live test,

6. Exit Plan

The project plan and a clear strategy for exiting the Regulatory Sandbox shall include:

- i. scenarios for transitioning and/or compensating customers if the proposed product, solution or service is discontinued; and
- ii. Description of scenarios for transitioning and/or compensating customers if the proposed product, solution or service is discontinued; and
- iii. proposals for deploying the product, solution or service on a commercial scale in Kenya after a successful exit from the Regulatory Sandbox;

7. Frequency Spectrum (for NFP applicants only)

In case you require frequency resources for the sandbox, please indicate the preferred frequency band(s). Frequency resources will, however, require a separate application subject to availability.

8. Market Information

- a) Describe similar products or services currently in the market.
- b) Describe each proposed service and how the service is to be accessed by the public.
- c) Demonstrate knowledge of the market segment by discussing the competition issues- what products and companies are likely to compete on providing the same or similar products/services.

9. Billing Information

- 9.1. Describe the billing system you intend to deploy (and, where applicable, details of the software/hardware),
- 9.2. Describe how customers will be billed, indicating whether billing shall be per unit or timed (second, minute etc.) and if the bills shall be itemised or if billing shall be in volumes,
- 9.3. Provide information on the proposed tariff for each service (in Kenya Shillings only).

10. Quality of Service Assurance

Describe how you will ensure quality services and how quality services will be maintained.

ANNEX III. Application Form

REGULATORY SANDBOX FRAMEWORK

Thank you for your interest in the Authority's Regulatory Sandbox. The Regulatory Sandbox is intended to allow for the testing of innovative products, solutions, and services that have the potential to deepen or broaden the Kenyan ICT markets and support technology transfer or commercialisation of research and innovation initiatives.

Eligible individuals/firms may participate in the Regulatory Sandbox if they meet the criteria set in this Policy Guidance Note.

This application form is intended to assist the Authority in understanding your innovative product, solution, or service and to help the Authority determine whether you qualify for participation in the Regulatory Sandbox.

The completed application form and supporting documentation must be submitted to the Authority. If the Authority has questions or requires additional information, it will contact you within fourteen working days of submitting your application.

Form CA/RS/...../2022

Application Form to participate in the regulatory sandbox

1. General Information

Name of Individual/Firm:	
Full names of all owners/founders and key management personnel:	
Business address:	
Phone number:	
Website URL (<i>if available; if password protected, please provide relevant access details</i>)	
Contact person: Name: Title: Telephone number: Email address:	
Is your business or any affiliated business (or their owners/founders or employees) currently registered, licensed, or supervised by the Communications Authority? If yes, please provide details.	
Is your business or any affiliated business (or their owners/founders or employees) currently registered, licensed, or supervised by any other regulatory authority in Kenya or another jurisdiction? If yes, please provide details.	
Is your business or any affiliated business (or their owners/founders or employees) currently operating under any regulatory exemption granted by the	

Authority or any other authority in Kenya or another jurisdiction? If yes, please provide details.	
Please describe the nature and scale of your current operations in Kenya.	

2. Details of the Sandbox Proposal

Additional information, such as supporting documents, may be provided.

Describe your innovative prototype, product, solution or service. Attach a business model or project synopsis.	
Describe the methodology used to offer your product, solution or service.	
Explain how your product, service, or solution will foster or accelerate the development of the Kenyan ICT markets.	
Identify the type of customers and investors you will target to participate in the Regulatory Sandbox test.	
How do you intend to acquire and engage clients?	
Identify any other businesses or partners, or institutions you are working with or plan to work with if you are selected to participate in the Regulatory Sandbox.	
Describe the business strategy or plan to deploy the product, solution or service in the broader Kenya marketplace after exiting the Regulatory Sandbox.	
Explain why your product, solution or service would benefit from participation in the Regulatory Sandbox.	
Identify the specific legal and regulatory requirements prescribed by the Authority that must be varied or waived in connection with a Regulatory Sandbox test of your product, solution or service.	
Please describe if your product, solution, or service raises new or complex regulatory concerns.	
Describe the current stage of development of your product, solution or service. If the product needs to be sufficiently developed to offer to customers, what is the anticipated development path and timeline for live testing?	
Describe the key consumer and data protection measures you have put in place during the period in the regulatory sandbox.	
Describe the Key investor protection, market stability and any other risks associated with your product, solution or service and how you intend to address those risks.	
Do any aspects of your innovation prototype, product, process or service that require IP protection? If yes, briefly explain the measures you will put in place to ensure IP protection during your period in the sandbox.	

Describe your plan for exiting from the Regulatory Sandbox.	
What is your plan for offering your product, service or solution in Kenya if you are successful?	
If you are unsuccessful, what is your plan for winding down the firm and addressing investors' interests or developing an alternative approach?	
Briefly describe or attach short bios on your key personnel's technology or financial industry experience.	
Please describe the financial resources, including any venture or potential funding, that you intend to use to develop and test your product, service, or solution in the Sandbox.	

3. Testing Criteria

Describe the use case you propose to test in the Regulatory Sandbox.	
<p>Describe in detail the testing program you propose, including</p> <ul style="list-style-type: none"> (a) test objectives and intended outcomes; (b) test parameters to measure the success of the test objectives/outcomes; (c) control boundaries for the test, including, among other things, customer type and number, and transaction size and total exposure limit; (d) customer acquisition plan for the test; (e) customer communication plans and templates, including sample risk disclosures for the live test; (f) key testing milestones and timelines; (g) anticipated duration; and (h) an exit strategy for customers upon completion or discontinuation of the live test. 	
<p>Describe the proposed control program and safeguards for a live test, including</p> <ul style="list-style-type: none"> (a) measures to monitor and ensure compliance with the safeguards to be established for the test; (b) measures to mitigate risks and impact to customers arising from any test failures; (c) reliance on other test partners (such as licensed service providers) to monitor or mitigate regulatory risks; (d) measures to handle customer inquiries, after-test services and complaints fairly and effectively; and (e) any programs for compensating customers who may have suffered damage as a result of participating in the test. 	

I/WE.....
 declare that all information given in this application and the attached documents are true and correct.

Dated thisday of20.....

Signed –

Name

Position

4. Attachments

Please attach:

- 4.1. Certified copies of all incorporation documents
- 4.2. Certified list of directors and shareholders
- 4.3. CVs for all founders and key management personnel
- 4.4. Testing Plan
- 4.5. Safeguards Plan (risk management plan)

5. Submission

The application form and any supporting documentation should be submitted to rpqm@ca.go.ke.

All application materials will remain confidential, although the Authority may report the number and types of firms that have applied to participate in the Regulatory Sandbox.

Other Sandboxes:

In the Dominican Republic, a new regulation was adopted in 2023, following a consultation process, to promote innovation and enable regulatory testing granting authority to the regulator, INDOTEL, to establish regulatory sandboxes.

Application for sandboxes in various sectors

Source:

https://www.un.org/development/desa/dpad/wp-content/uploads/sites/45/publication/PB_123.pdf

<i>Country</i>	<i>Policy Reform or Legal Prescript</i>
<i>Rwanda</i>	<i>The final draft regulations governing the regulatory sandbox in Rwanda cites Article 129 of Law No. 24/2016 of 18/06/2016, which governs Information and Communication Technologies. Paragraph 7 empowers the regulators to: “encourage investment and innovation in information and communications technologies, for the promotion of electronic transactions”¹³.</i>
<i>Kazakhstan</i>	<i>The government, through collaboration between the Artificial Intelligence Fund (AI Fund) and the Ministry of Digital Development, Innovation and Aerospace industry, has introduced a legislative framework through a draft bill for the use of experiments and sandboxes, referred to as an “experimental regime”, to promote innovation and digitalisation [11] further.</i>
<i>Singapore</i>	<i>Singapore is transforming itself into a Smart Nation through its Digital Strategy. The Smart Nation Strategy is anchored by three pillars, digital society, digital economy, and the digital government. As part of the Digital Economy pillar, the Strategy highlights the importance of regulatory agility through sandboxing¹⁴.</i>
<i>Colombia</i>	<i>Law 1955 of 2019 includes general references on digital transformation and the mandate to generate spaces for innovation in the regulation. This served sectors such as Finance and telecommunications, among others, to explore and open regulatory sandboxes to promote innovation. The development of new businesses and innovation was the focus of this inclusion in the law of the development plan 2018-2022. Telecommunications/ICTs and the financial sectors used this standard to generate their sandbox regulations.</i>

¹³ https://rura.rw/fileadmin/Documents/ICT/Laws/Final_Draft_Regulation_Governing_the_Regulatory_Sandbox_in_Rwanda_v2.0.pdf

¹⁴ <https://www.smartnation.gov.sg/about-smart-nation/pillars-of-smart-nation>

ANNEX IV: Comparison of Regulatory Sandboxes

Element	Description	Design Choices	Kenya	Rwanda	Saudi Arabia	Colombia
Eligibility	<ul style="list-style-type: none"> Define who can participate in the sandbox. Eligibility should be articulated clearly to ensure a level playing field across market participants 	<ul style="list-style-type: none"> Open to incumbents only Open to newcomers only Open to non-licensed companies (e.g. technology providers, data companies) Blended - open to all who qualify 	All who are keen to pilot innovative technology solutions	<ul style="list-style-type: none"> Promotes technology innovation. Promotes growth, efficiency, and competition. Promote better risk management solutions and regulatory outcomes. Improve the choices and welfare of customers. 	<ul style="list-style-type: none"> New use cases and business models Innovations in existing use cases Emerging technologies enabled services requiring regulatory amendments 	<p>selection criteria:</p> <ul style="list-style-type: none"> in the case of innovative products, services or solutions that generates benefit to the citizens demonstrated need
Governance	<ul style="list-style-type: none"> Defines the internal operating structure of the sandbox, role and responsibilities, and key operational processes 	<ul style="list-style-type: none"> Specialized sandbox unit Hub and spoke a central point of contact coordination sandbox enquiries with other units of the regulator Separate entity 	Communications Authority of Kenya – ICT Regulator led	Rwanda Utilities Regulatory Authority, responsible for all utilities including ICTs.	The Communications, Space & Technology Commission (CST) – ICT Regulator	Communications Regulation Commission – ICT Regulator led
Timing	<ul style="list-style-type: none"> Duration of the admission window Duration of the test 	<ul style="list-style-type: none"> Periodic admission (cohort-based) Permanent admission window (on-tap) Testing periods range from 3 to 36 months 	12 months, renewable for another 12 months	Upto 24 Months	9 months, renewable for another 12 months	12 months, renewable for another 12 months
Test Restrictions	<ul style="list-style-type: none"> Limit to the scope, and/or conduct of the sandbox test to 	<ul style="list-style-type: none"> Number and type of target market Number of products 	<ul style="list-style-type: none"> Number and type of customers 	<ul style="list-style-type: none"> Ability to hold or control customers 	<ul style="list-style-type: none"> Participants unable to produce a final prototype 	Safeguards plan defined with each project

	minimize potential harm.	and service offering <ul style="list-style-type: none"> • Geographical limits. • Consumer protection safeguards. 	<ul style="list-style-type: none"> • Type and size of customer transactions • Manner and type of financial promotion 	money and investments. <ul style="list-style-type: none"> • The number of customers written consent required. • The requirements surrounding the participants handling and protection of customer information. 	<ul style="list-style-type: none"> • Participants prototype only able to demonstrate basic functions • Participants unable to articulate innovation. 	and depending on the type of innovation. Geographical, legal restrictions, etc., can be defined. They are not pre-set.
Exit options	<ul style="list-style-type: none"> • Individual test outcomes • Program-level key performance indicators (KPIs) • Incorporation of insights and lessons learned into the broader regulatory strategy 	<ul style="list-style-type: none"> • KPIs in terms of the final output(number of graduating firms • KPIs in terms of a regulatory change promoted. 	<ul style="list-style-type: none"> • Migrate to full authorisation • Employ an exit strategy 	<ul style="list-style-type: none"> • Migrate to full authorisation • Employ an exit strategy 	<ul style="list-style-type: none"> • Sandbox graduation: Full or Limited approvals to operate • Proposed further testing • Terminate participation. 	<ul style="list-style-type: none"> • An exit plan is presented. • General authorization is contemplated • Or,elimination of regulation