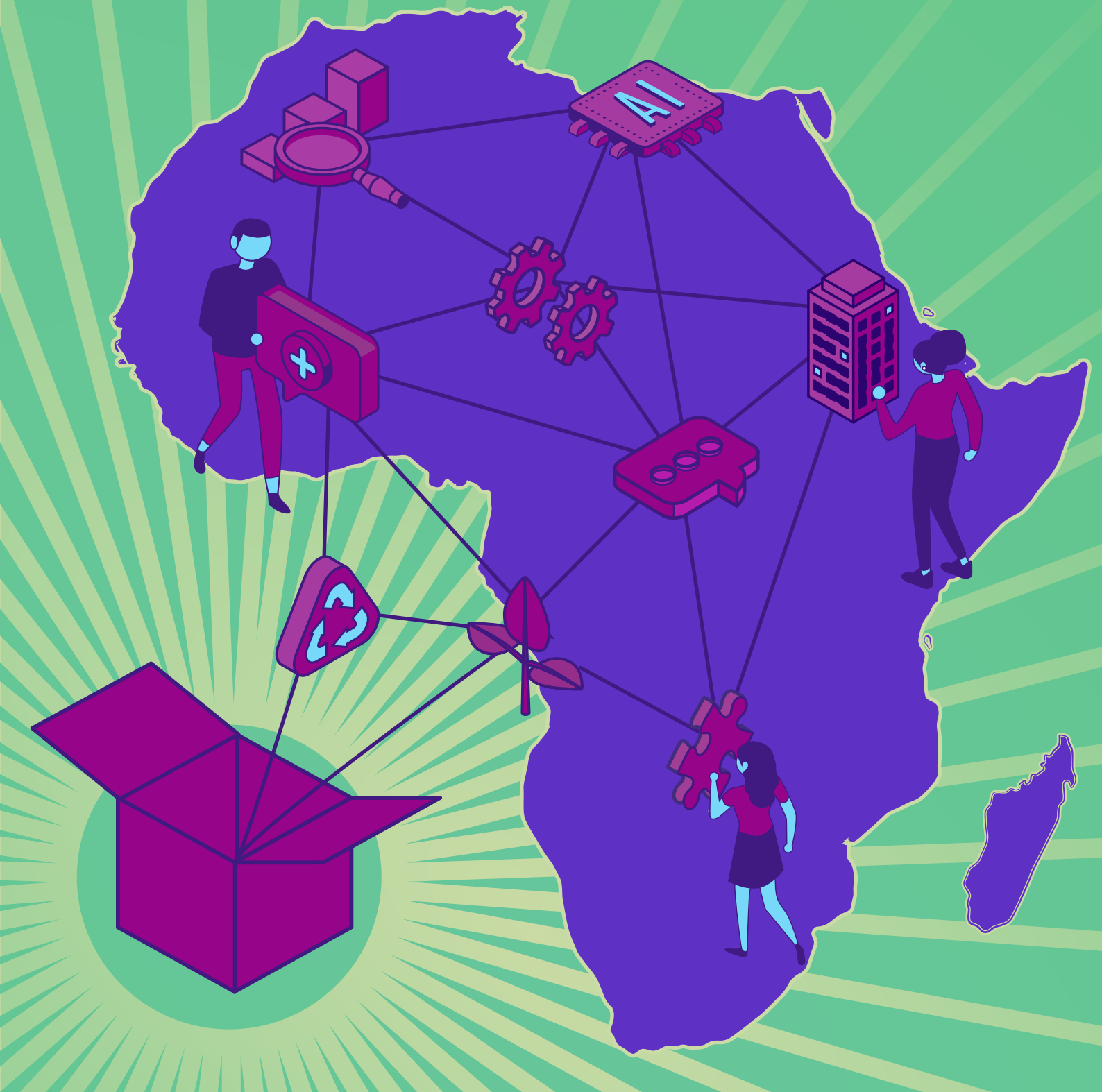
DATASPHERE
INITIATIVE

# AFRICA SANDBOXES OUTLOOK

## Thinking outside the box for responsible innovation in the age of AI



# EXECUTIVE SUMMARY

The responsible creation, extraction, and maximization of data's economic and social value is a global challenge. While the data revolution offers significant benefits—like boosting economic growth, improving healthcare, and expanding access to education—it also introduces complex challenges requiring adaptive governance mechanisms. However, policymaking lags behind rapid technological advancements. Regulators often lack the skills to design flexible frameworks, and traditional processes fail to bridge sectoral silos or incorporate insights from key stakeholders like the private sector, technical experts, civil society, and academia. Sandboxes are emerging as a promising approach for testing regulatory and technical innovations capable of tackling the complex challenges presented by data and artificial intelligence (AI).

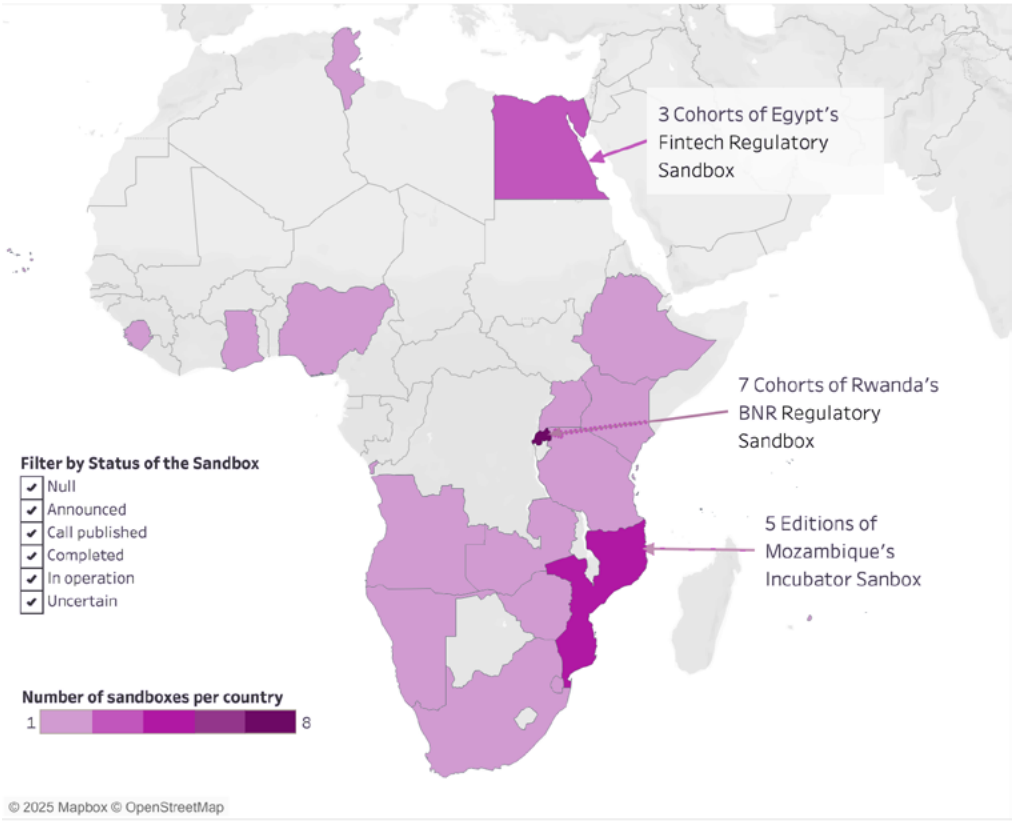
Sandboxes—safe spaces for testing new technologies and practices against regulatory frameworks or experimenting with innovative data governance approaches—can be classified in different ways. The Datasphere Initiative categorizes sandboxes in 3 ways, operational, regulatory, or hybrid.[1] Operational sandboxes handle data, regulatory sandboxes provide dialogue and guidance on how data is handled and hybrid sandboxes incorporate elements of the two.

## Key findings: Investigation of sandbox cases in Africa

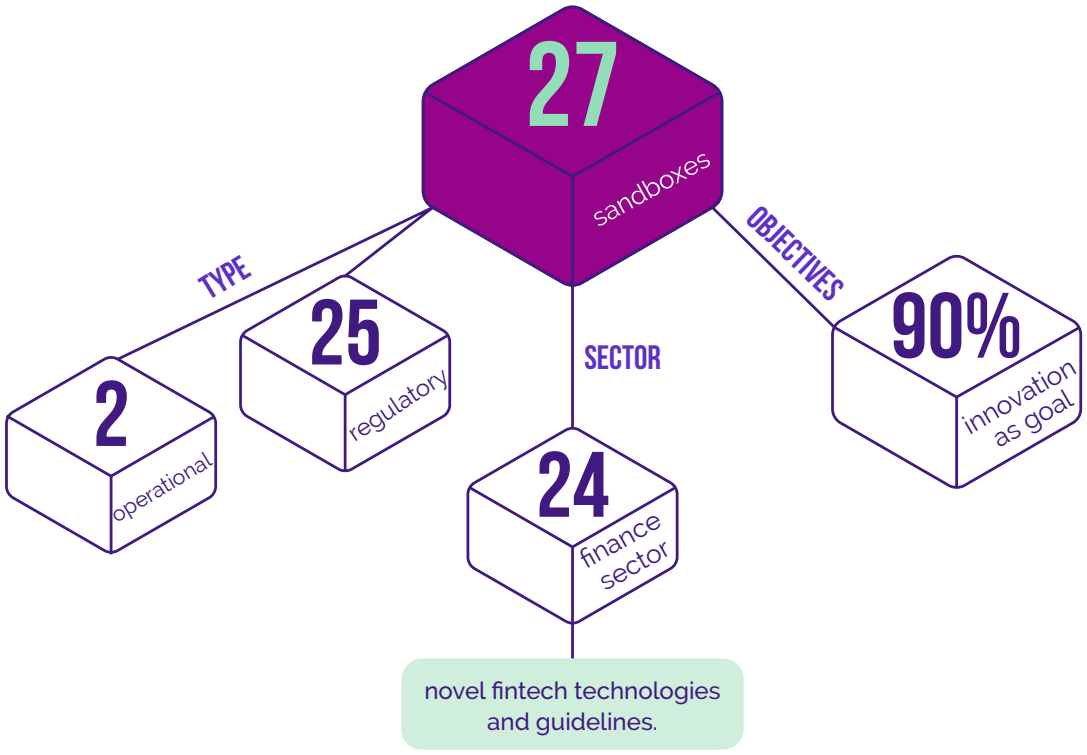
As part of the Datasphere Initiative's Africa Sandboxes Forum we have mapped and analyzed existing sandboxes in Africa, researched unique sandbox environments that have facilitated responsible innovation. Our investigation identified a total of **25** unique **national sandboxes** and **two regional sandboxes**; i.e. Ecobank's pan-African Banking Sandbox, and the Digital Earth Africa Analysis Sandbox.

[1] Read more about the Datasphere Initiative's work on Sandboxes here https://sandboxes.thedatasphere.org/

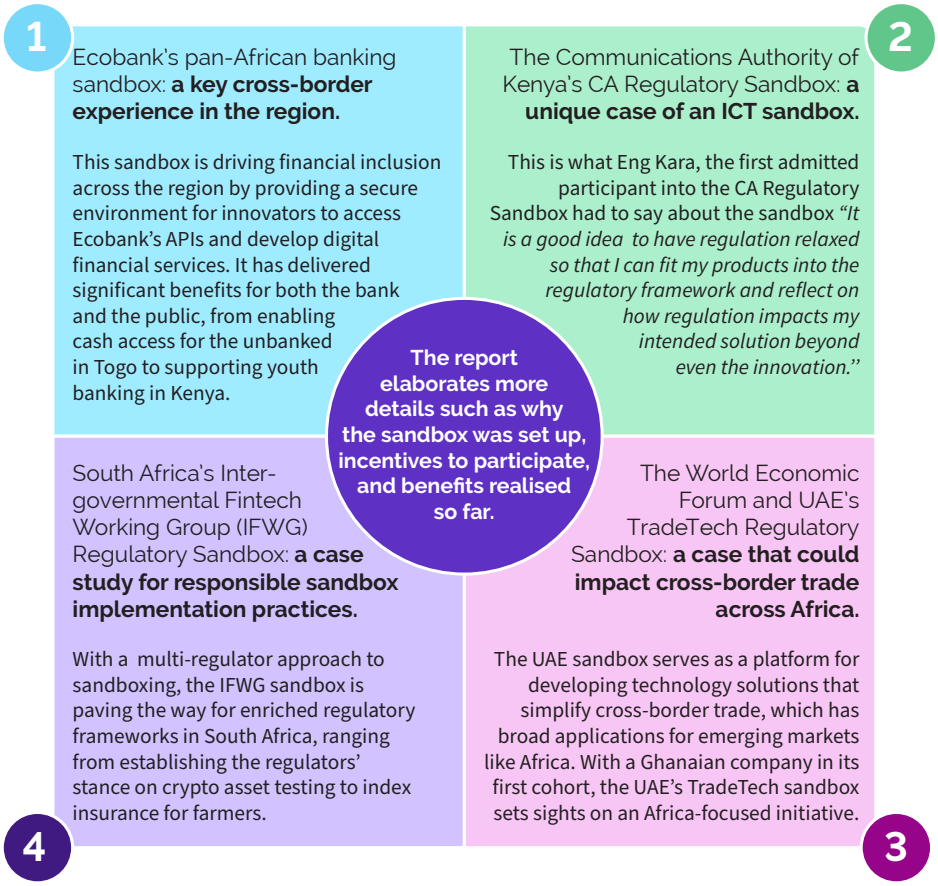
A snapshot of the 25 national sandboxes mapped in the region.




## Type, focus and objective



Sandboxes in Africa are at varying stages of development, with most in operation, some completed, and a few announced but with uncertain status. We interacted with practitioners from the public and private sectors to learn about their experiences with sandboxes. Below are key highlights from the case study findings.




## Policymaking in the age of AI and the potential of sandboxes

We conducted a series of regulatory roundtables and working group engagements to discuss sectors and policy areas where sandboxes could foster responsible innovation. AI was one of the key focus areas discussed. While AI offers significant economic opportunities and productivity gains, challenges such as limited access to quality data, inadequate infrastructure, and the lack of effective policies hinder its potential in Africa. Furthermore, responsible AI development in the region requires new and agile approaches that will facilitate uncovering and integrating African AI narratives to ensure context-responsive technologies. Sandboxes can help address these challenges by providing a testing ground for regulatory interventions, reducing uncertainty, and gathering evidence for policymaking. Similar insights were gathered for health, climate, and sustainability.

## Learnings, Insights & Recommendations to enhance the use and impact of sandboxes

The development and implementation of sandboxes in Africa—primarily in the financial sector—has provided valuable insights into regulatory experimentation, fostering an enabling environment for innovation ecosystems, offering lessons and opportunities to expand their use across sectors and borders. Below are our highlights.

- **Experiences point to a promising sandbox environment where more investment, capacity and collaboration is needed.** As of October 2024, there are **25 unique national sandboxes** from **15 countries**, including examples with several **cohorts up to 7 iterations**. This demonstrates the usefulness and success of sandboxes, with valuable lessons that can inform future deployments.

*Enhancing transparency, fostering open consultations throughout the sandbox lifecycle, and documenting best practices and lessons learned would effectively share these experiences, benefiting others aiming to implement similar initiatives.*

- **Across Africa, sandboxes have particularly advanced the financial sector.** These sandboxes foster emerging innovations and create a dynamic space for regulators to learn about new technologies. They not only facilitate the testing of novel financial products and services in a controlled environment but also enhance the regulatory framework by providing regulators with firsthand experience and insights into cutting-edge technologies.

*Expanding sandbox initiatives to other sectors could drive socioeconomic development and unlock new opportunities for growth.*

- **While sandboxes in the context of digital health are in the early stages of development and our analysis identified one recently deployed sandbox covering AI innovations on the continent, their application in this sector could prove highly impactful.** Sandboxes can be used to test data breaches and privacy concerns in healthcare, clarify the roles of stakeholders, and provide a shared platform for engaging and discussing issues to foster digital health innovations. They can help gather crucial evidence for policy making, drive regulatory innovation, and create an enabling environment for AI. Additionally, sandboxes could also foster the development of robust data collection and management practices for climate change mitigation efforts and effectively address data-sharing issues.

*To fully realize the potential of sandboxes, it is essential to leverage comprehensive approaches to measure and enhance effectiveness.*

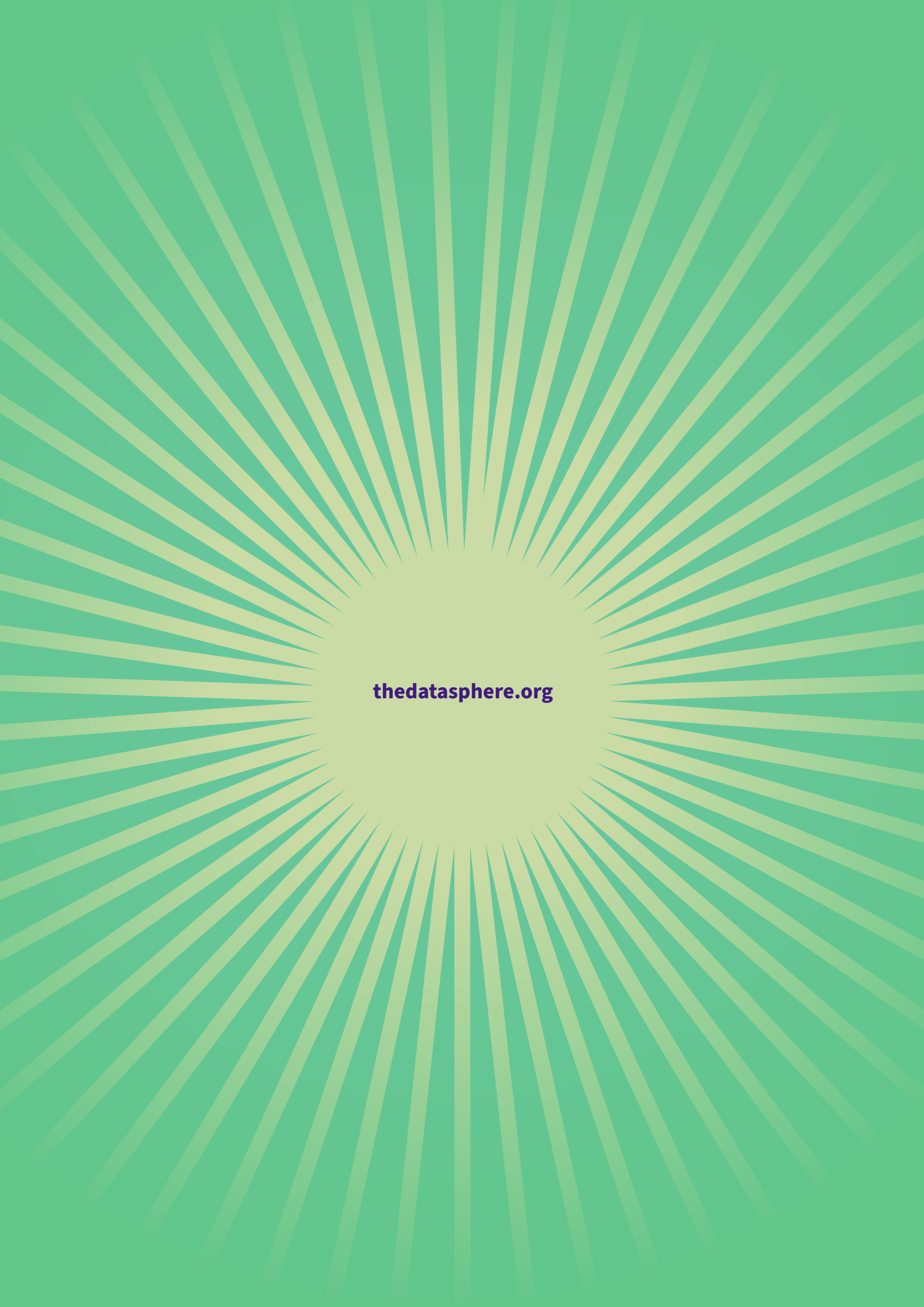
- **Governments and the private sector need support to design and deploy sandboxes for responsible regulatory and technical innovation.**

Our analysis reveals that most online references to sandboxes across the continent highlight technical innovations resulting from their use. However, sandboxes can also serve as safe environments for experimentation and the refinement of regulatory approaches, as well as for developing and stress-testing policy frameworks.

*Shifting the focus from purely technical innovation to regulatory innovation can unlock their full potential effectively shaping digital policy.*

## Conclusion

Sandboxes offer a valuable opportunity to advance agile policymaking processes, particularly as the linear nature of regulation in many nations struggles to keep pace with rapidly advancing technologies. For Africa to avoid stifling innovation or risking harm to uses of emerging technologies like AI, agile tools such as sandboxes provide a critical middle ground. They enable stakeholders to experiment with new technologies and practices within the context of regulatory frameworks. It is also important to note that sandboxes are complex to set up, resource intensive and require regulatory skills and capacity to design and participate in. The success of sandboxes largely depend on the extent to which the relevant government authority has set them up responsibly, adhering to minimum building blocks in areas such as data governance, stakeholder engagement, and transparency. Given the complexities and risks associated with sandboxes, there is a pressing need for additional resources in terms of capacity building for regulators to address risks associated with sandboxes and power responsible innovation.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