Data and Digital Governance

Armando Guio Español
Saint Lucia, 2025

What actions are countries taking to govern data and emerging technologies?

1. Wait and see
2. Test and learn
3. Ban new technologies

A new paradigm

“(…) We are at a turning point in (economic) development strategy. Strategies that worked well in the past are unlikely to do so in the decades ahead.
”The focus [now] would be on experimentation and learning, with objectives, instruments, performance criteria and institutions developed and shaped over time. Government capacity would be accumulated in the process, rather than presumed as given.”

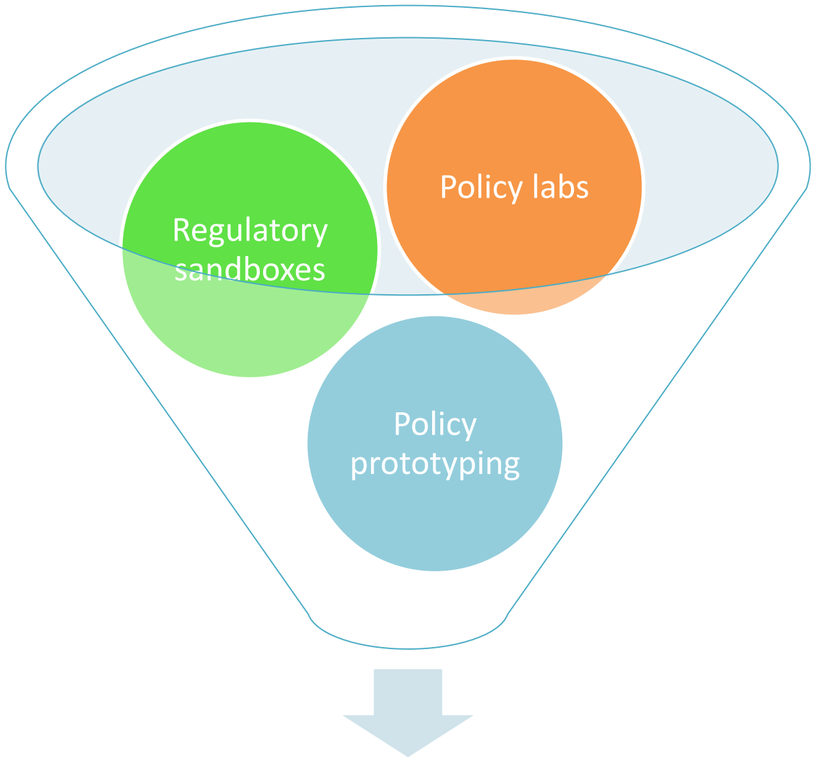
Rodrik and Stiglitz's Proposal (2024): Embracing a New Mindset for Economic Development

A new paradigm of Experimentation

“Yet, experimentation alone is insufficient. What is needed is a more holistic concept of regulatory learning that is not just about us learning from our own experiments, but also learning from others’ experiments, ideas, experiences, and insights. Such learning to regulate requires international cooperation and coordination, albeit very different than what exists today.”

Mayer-Schönberger and Gasser (2025): On the Shoulders of Others: The Importance of Regulatory Learning in the Age of AI

Some experimentation tools available

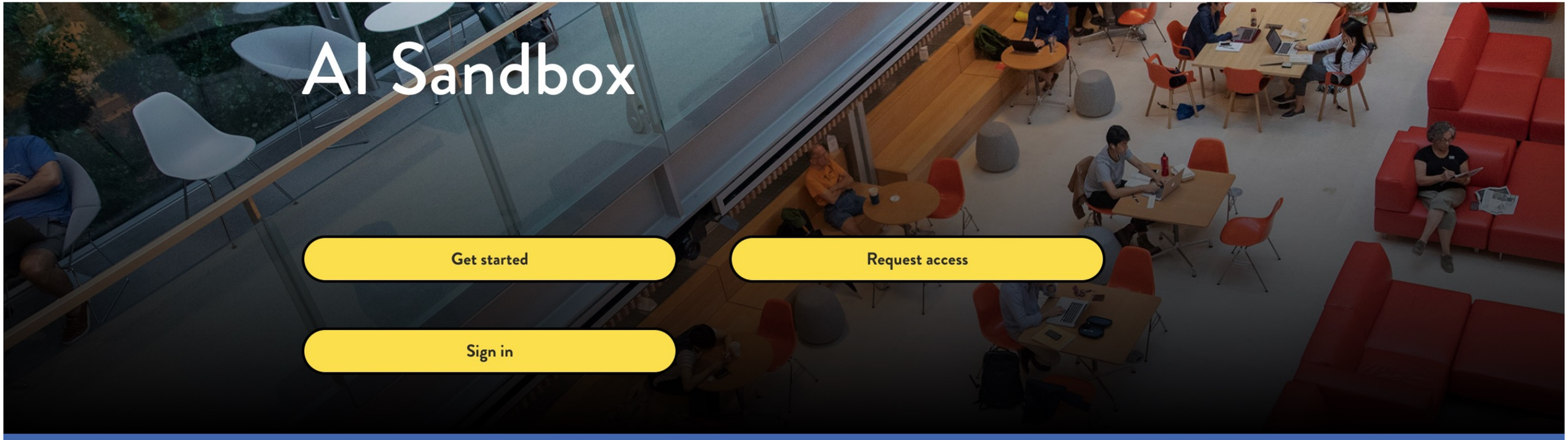


Defining Regulatory Sandboxes

“A regulatory sandbox is a regulatory approach, typically summarized in writing and published, that allows live, time-bound testing of innovations under a regulator’s oversight. Novel financial products, technologies, and business models can be tested under a set of rules, supervision requirements, and appropriate safeguards.”

UN Secretary-General’s
Special Advocate for Inclusive Finance for Development

AI Sandbox



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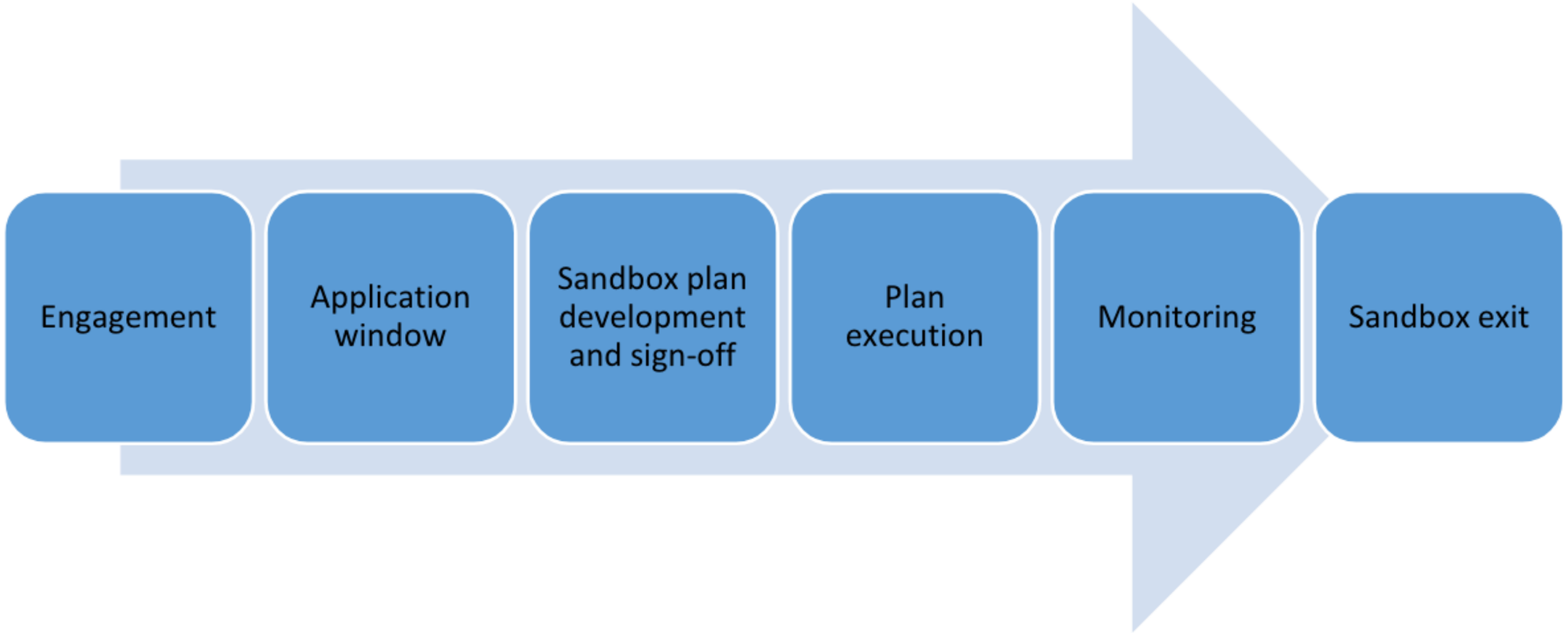
News / The University has released initial guidelines for the use and procurement of generative AI tools.

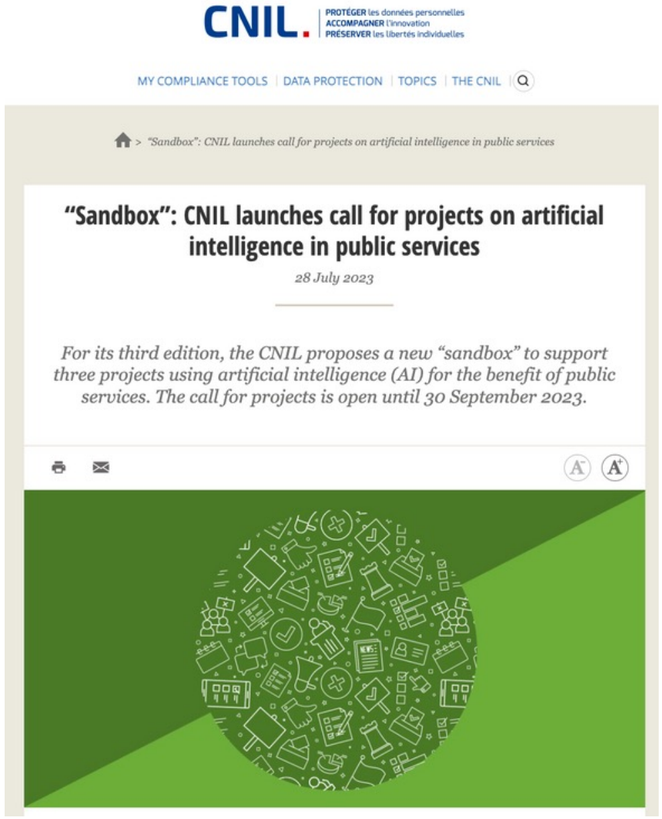
The AI Sandbox provides a "walled-off," secure environment in which to experiment with generative AI, mitigating many security and privacy risks and ensuring the data entered will not be used to train any public AI tools. It offers a single interface that enables access to seven different Large Language Models (LLM): Azure OpenAI GPT-3.5, GPT-3.5 16k, GPT-4, and GPT-4 32k; Anthropic Claude 2 and Instant; and Google PaLM 2 Bison.

How have authorities designed and implemented regulatory sandboxes?

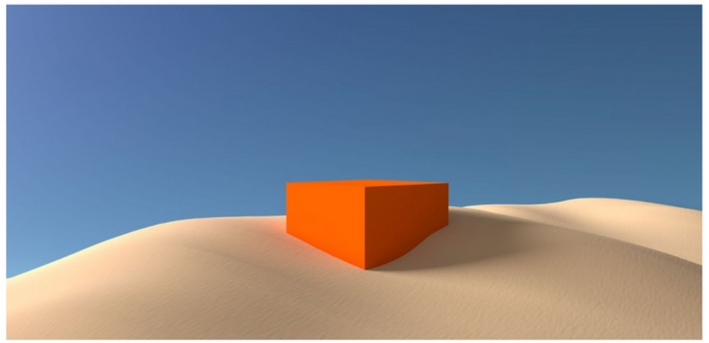
FEATURES	UK	SINGAPORE	AUSTRALIA
OBJECTIVES	Promote competition in the interest of consumers by supporting innovation.	Transform the country into an intelligent financial center by promoting new technologies.	Motivate and facilitate innovation for the benefit of investors and consumers, ensuring that regulation is appropriate and effective.
ELIGIBILITY CRITERIA	Innovation. for the benefit of consumers and ready for testing.	Technology used in an innovative way, for the benefit of consumers or industry, to be used in Singapore.	Applicable only to certain products and services with limits as to the type of clients and their exposure.
TIME AND COSTS	Limited duration at no cost.	Limited duration at no cost.	12 months and fees for application and review.
TOOLS	Restricted authorization, exceptions, non-application of certain rules.	Flexibility in the application of certain rules determined on a case-by-case basis.	Exceptions to the license.

Operating Model (ICO Proposal)





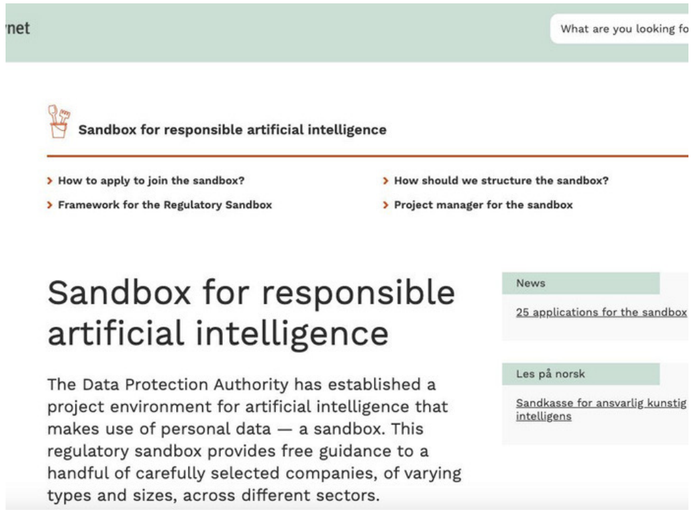
France



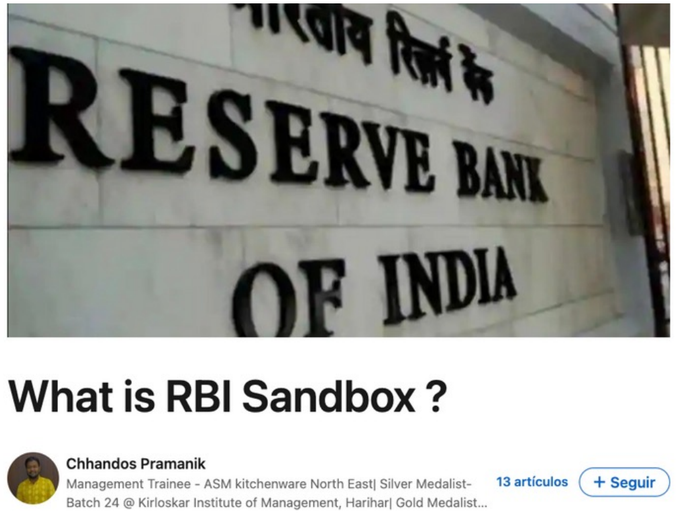
Mauritius

Colombia

Brazil



Norway



India

EU AI Act: Article 57

Summary

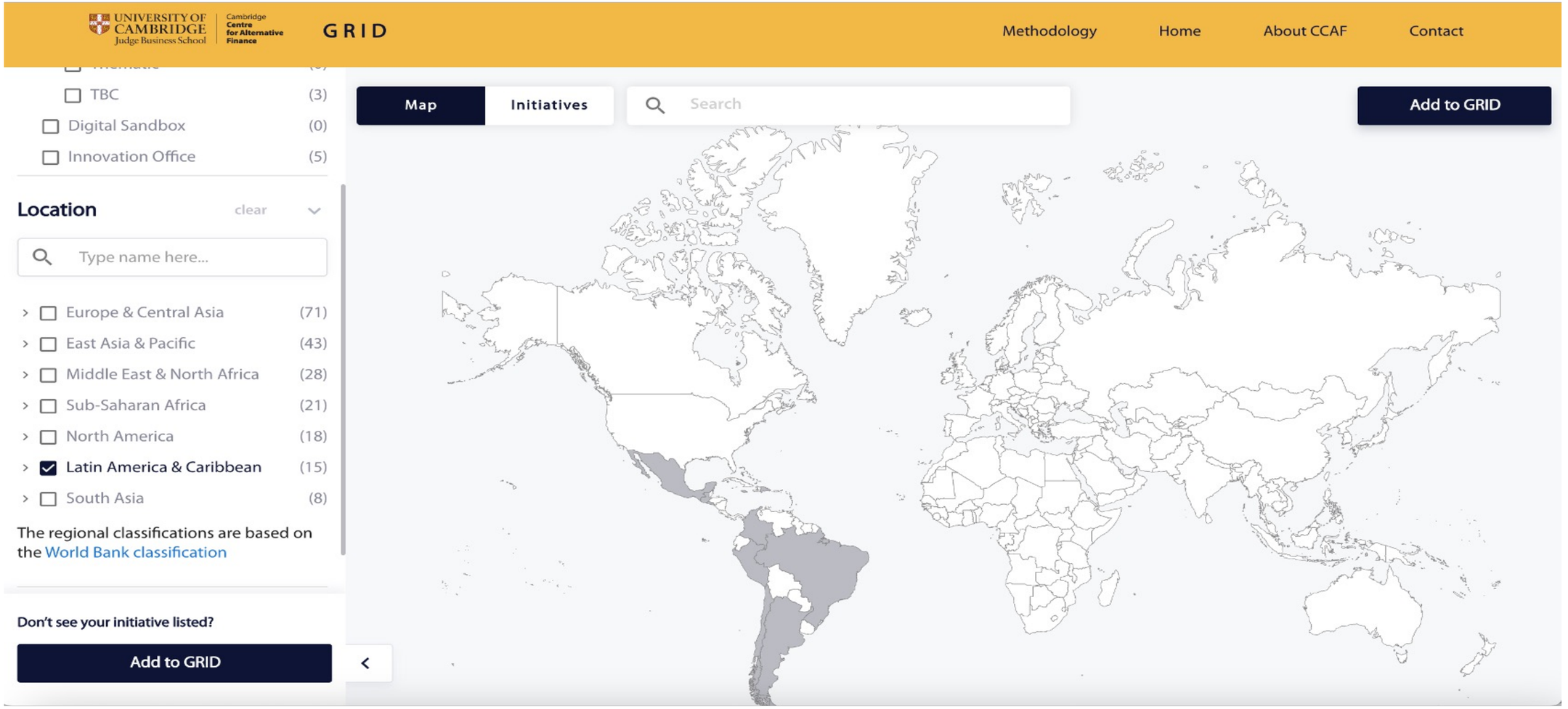
“The EU is requiring member states to create at least one "AI regulatory sandbox" at a national level. The goal is to foster innovation while identifying and mitigating any risks, particularly those related to fundamental rights, health, and safety.”

“The sandboxes will also provide guidance on regulatory expectations and requirements. If an AI system is successfully tested in a sandbox, the provider can use this as proof of compliance with regulations. The sandboxes are also intended to facilitate cross-border cooperation and share best practices.”

Generated by CLaiRK, edited by Future of Life Institute

What is happening in the Caribbean regarding regulatory sandboxes?

Regulatory Sandboxes in the Region



Regulatory Sandboxes in the Region

Regulatory Sandboxes in the Region

Trinidad & Tobago Guardian

HOME NEWS 2025 GENERAL ELECTION SPORT BUSINESS TRAFFIC C

UWI, TATT sign landmark agreement

by Ryan Bachoo 633 days ago 20230629

From left back row: Prof. Sanjay Bahadoorsingh, Head of Department of Electrical and Computer Engineering, Faculty of Engineering, The UWI St. Augustine Campus, Mr Kurleigh Prescod, Executive Officer Technology and Engineering, Prof Rose-Marie Belle Antoine, Campus Principal, The UWI St. Augustine Campus, Mrs. Cynthia Reddock Downes, Chief Executive Officer, TATT

"The University of the West Indies (The UWI) and the Telecommunications Authority of Trinidad and Tobago (TATT) have signed "a ground-breaking" agreement to establish a Conformance and Interoperability Regulatory Sandbox.

This initiative, facilitated by The UWI's Department of Electrical and Computer Engineering (DECE), aims to foster innovation and accelerate the development of radio frequency (RF)-enabled devices that address local and regional needs."

Regulatory Sandboxes in the Region

Discover Bermuda's Stories: Tune in to CITV for Government Updates, Cultural Heritage, a

GOVERNMENT OF BERMUDA

What are you looking for?

HOME RESIDENTS BUSINESS GOVERNMENT COMING TO BERMUDA

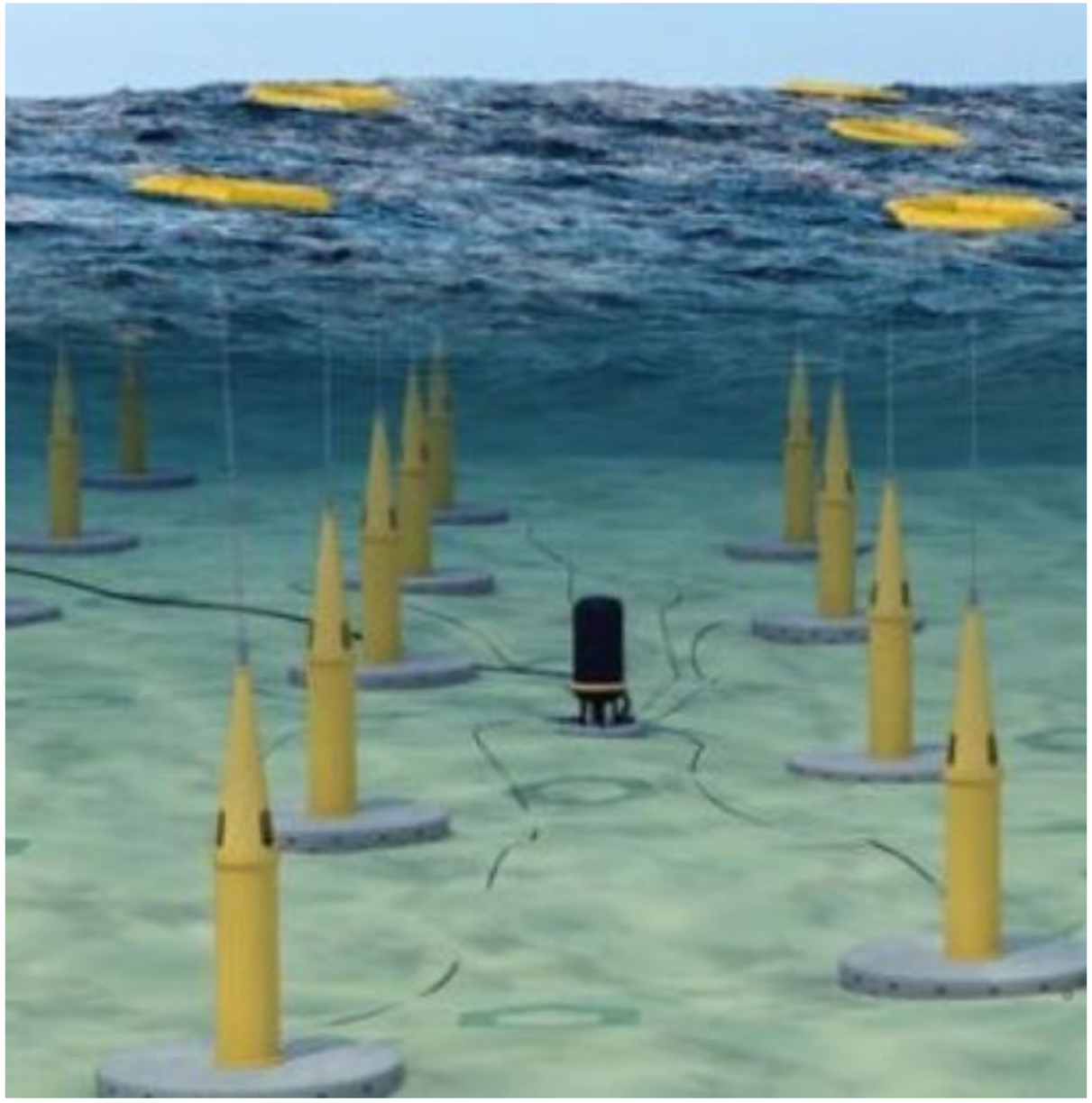
Sandbox Regulations and Seabased

14 December, 2021

The Government is committed to shaping Bermuda as a centre for innovation. We have a reputation for innovation in the insurance sector, developing opportunities in Fintech, and we now want to be a centre for innovation in the Energy sector. As part of Bermuda's Economic Recovery Plan, creating an energy regulatory sandbox will encourage new renewable energy technology developers to test their products in Bermuda, allowing Bermudians the potential to access new technology. It also aligns with our effort to reduce the energy cost to benefit our economy, the pocketbooks of residents and businesses.

The reason for the introduction of the Energy Regulatory Sandbox, and in the interim, the Memorandum of Understanding, is to begin exploring possible clean and renewable energy solutions for Bermuda. It also encourages much-needed inward investment and allows space for innovators to test their technology. The new sandbox will encourage companies serious about pursuing innovative technologies in the energy sector to come to Bermuda.


MACGREGOR



PRESS RELEASE: The Bermuda Sandbox and Sea-based Wave Technology comes to Tonga

20 Mar, 2023

Pacific Regional Regulatory Sandbox (PIRI)

The Pacific Financial Inclusion Programme Legacies

Supporting an enabling regulatory framework for financial inclusion in the Pacific

?

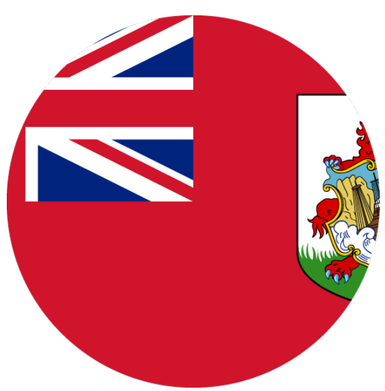
?

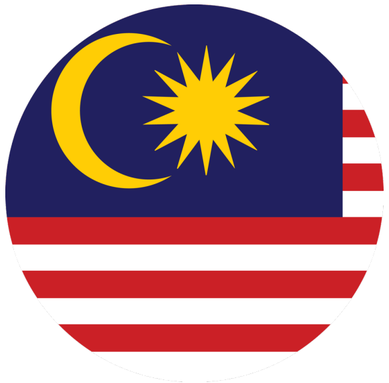
UN Capital Development Fund's (UNCDF)

Regulatory Sandboxes in the Global South: Lessons on Developing a Readiness Tool

- Drawing on experiences and best practices from low- and middle-income countries.
- Identifying unique elements of sandboxes developed in some of these countries.
- Proposing initial measures for assessing government agencies' readiness to design and implement successful regulatory sandbox experiences (RESMA Methodology)

Countries selected and analyzed





Our Proposal: The RESMA Methodology

The methodology involves assessing five specific points in a specific jurisdiction:

1. Policy framework for regulatory experimentation
2. Identification of relevant regulatory questions for a sandbox
3. Assessment of available resources and cost-effectiveness
4. Establishment of an organized working methodology
5. Capacity to introduce policy reforms and enhance State capacities

It functions as a step-by-step questionnaire. As answers are developed, this enables agencies to progress further in their analysis and maturity for regulatory experimentation.

Experimenting with Data Governance Models: The Case of Colombia

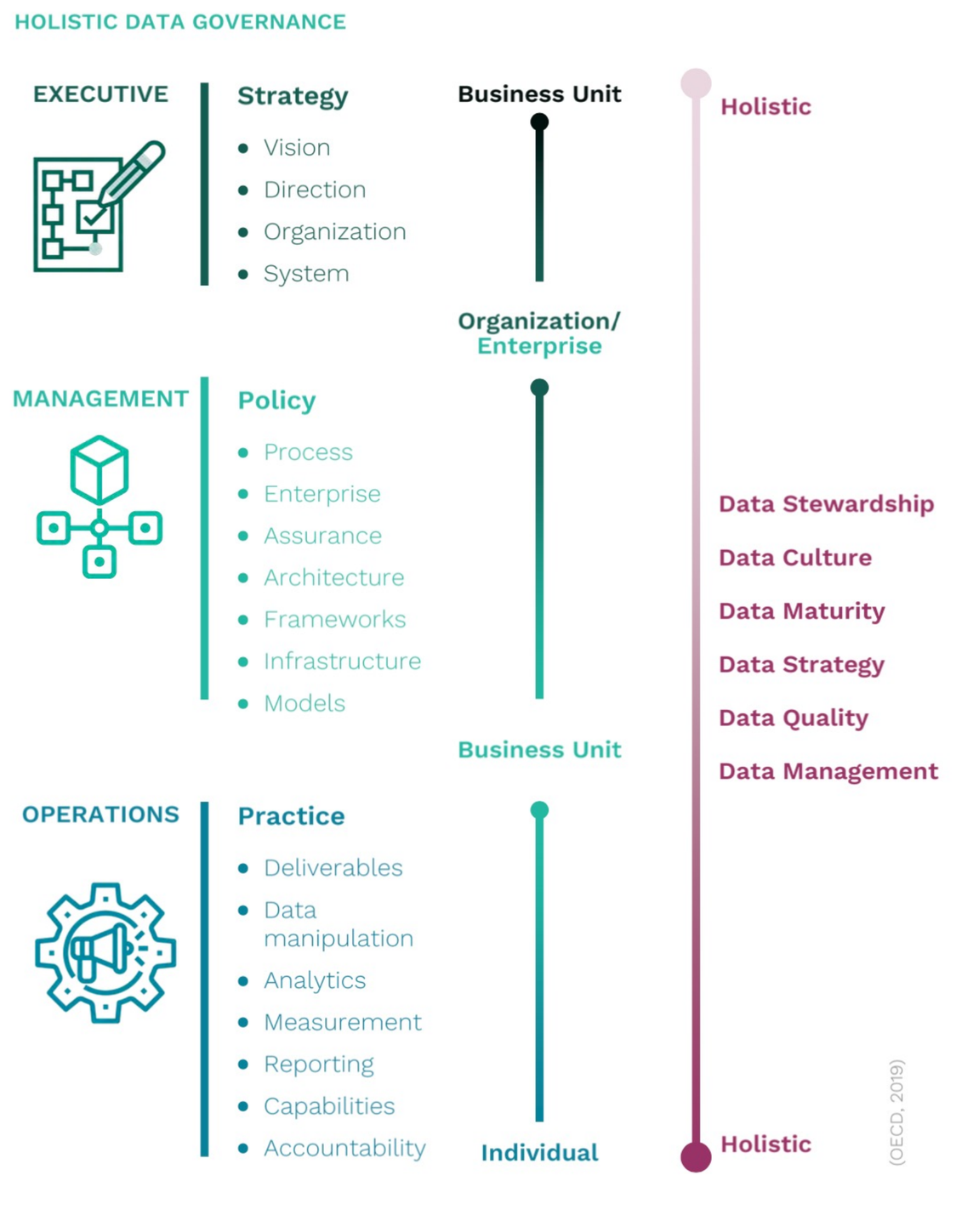
Colombia’s AI Strategy

- “Colombia must continue developing a comprehensive data infrastructure that enables the design and implementation of AI systems in the country. This should prioritize the creation and identification of large-scale, interoperable, and structured databases while reducing unnecessary and unjustified barriers to data access for developers of this technology.”

- “Additionally, governance models should be established to allow entities from various sectors, both within Colombia and abroad, to share and exchange information quickly and easily. This implies that data protection regulations must safeguard citizens' rights within a risk management framework.”

1. **Data Governance Definition**

- A set of rules governing the lifecycle and flow of data according to its typology, aimed at ensuring its quality, usage, ownership, sharing, security, and deletion, while focusing on value generation and minimizing associated risks. This is expressed through a policy that integrates controls, business goals, strategic objectives, involved processes, and management indicators.
- Governance encompasses processes of data generation, collection, sharing, aggregation, exploitation, and innovation.



2. Rethinking Data Governance: Beyond Policies and Lifecycles:

1

Data Governance and the Data Lifecycle: Governance is intrinsically linked to the data lifecycle, addressing the needs and processes that occur within it.

2

Governance as Policy Implementation: Governance represents the way data policies are expressed and materialized. While there are policies aimed at establishing public data governance frameworks, these often lack a holistic perspective that involves other sectors.

3

Limitations of Current Governance Perspectives: Current governance is often framed around a limited set of verbs or activities related to data processing and treatment. This approach can constrain data exploitation to predefined activities, which needs rethinking in a rapidly changing context.

3. Proposed New Model for Data Governance

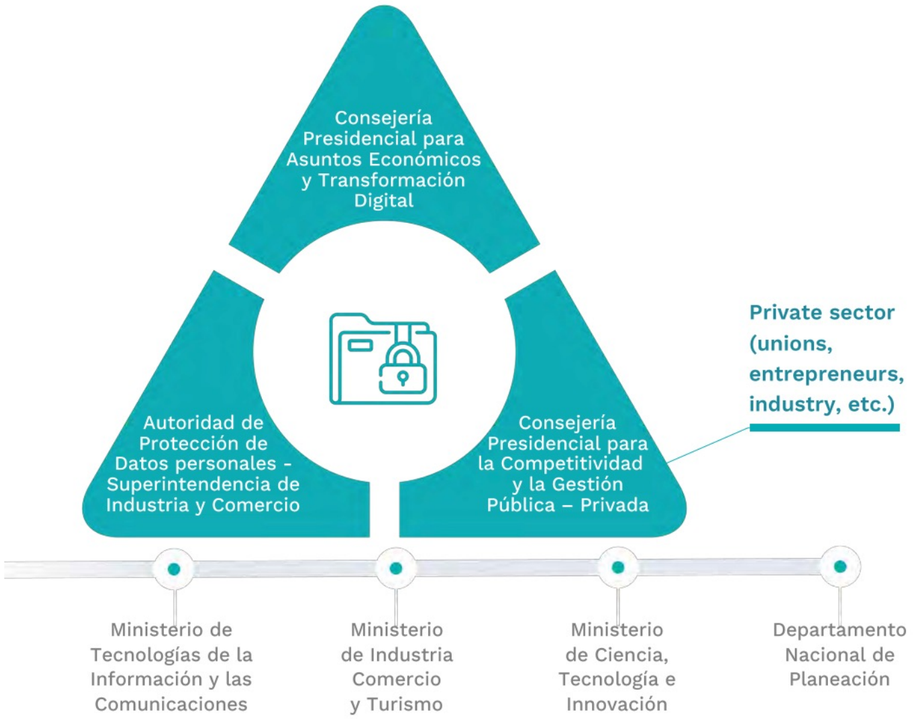
Alignment with Institutional and Public Policy Frameworks
The model must align with the current institutional structures and public policy frameworks to ensure relevance and effectiveness.

Adoption of a Technical and Ontological Approach
Beyond proposing a standardized framework for data governance, it is crucial to assess the maturity level of the infrastructure that each entity is developing and utilizing.

Fostering Trust
The model should actively work toward building and maintaining trust among stakeholders, ensuring transparency and accountability.

Enhanced Information Sharing with the Private Sector
The model must facilitate greater and more efficient data exchange between public entities and the private sector to unlock collaborative potential.

Public-Private Collaboration Model:



This is one of the most innovative models of data governance in Colombia, since it seeks coordination between the Presidency of the Republic and a body that exercises oversight and control functions to promote the same public data policy. Likewise, the knowledge of all entities is vital to develop models such as *data trusts* that are sustainable and adapted to the regulatory needs of the data protection regulations in force in Colombia. Likewise, this must respond to the needs of the entrepreneurial and private sector, which is why the leadership of the Presidential Counselor's Office for Competitiveness is essential on this point.

Trust Fostering:

One of the most important tasks of this governance framework is the generation of spaces for constant dialogue with groups in society, especially those that carry out citizen oversight activities. Likewise, the academic sector has an important role to play in analyzing policies and models to be used and in identifying points for improvement. Therefore, this part of the governance model should be led by the National Planning Department and the Ministry of Science, Technology and Innovation. The first entity has extensive experience interacting with citizens and has developed clear methodologies for the reception and analysis of comments and feedback generated by them, especially during the socialization of the Conpes' draft documents.

Main Recommendations for Colombia's Data Governance:

- **Build on Existing Efforts**
  Continue advancing existing policy initiatives while adapting to the new context and demands of emerging technologies like artificial intelligence.
- **Promote Coordination Beyond Technical Aspects**
  Focus on integrating public policies and regulatory frameworks (Data Commons 1.0), prioritizing legal and policy interoperability.
- **Innovate and Orchestrate Governance Models (Experimentation)**
  Introduce governance frameworks that respond to various objectives. Ensure their coordination and successful interaction through leadership by a dedicated entity, such as the Presidential Council for Economic Affairs and Digital Transformation.

Key Policy Outcomes and Projects

Data Marketplace

- This was an introductory framework for understanding data exchange economies and their significance in the context of Colombia's digital transformation. It explores:
  - Benefits, obstacles, and implementation mechanisms.
  - Ongoing technological and regulatory projects (energy sector)
  - Technical proposal for the implementation of marketplaces
- Given that the data exchange ecosystem is in an emerging stage, this document serves as a resource for public entities, private sector companies, and academic institutions to navigate this evolving landscape.

Data Sandbox Platform: Fostering Innovation in the Public Sector"

- The **Data Sandbox Platform** provides access to the latest data science technologies to experiment, evaluate, and develop solutions for public and citizen-related challenges in a real-world context.
- **Key Objectives:**
- Facilitate **collaborative data exploration** among users within the same public entity.
- Enable storage and processing of **structured, semi-structured, and unstructured data** using Big Data technologies.
- Provide a **shared space for pilot projects**, allowing public entities to test Analytics and Big Data solutions while adhering to terms, conditions, and capacity requirements.

Data Trusts

- A data trust serves as a framework, both legal and technical, for managing and sharing data securely. It fosters collaboration among organizations by establishing trust through well-defined rules, safeguarding data privacy, and ensuring confidentiality.
- The structure of a data trust is built on two main pillars: legal agreements that govern data usage and a technological platform that facilitates data collection, aggregation, protection, and management.

Key Insights

Discussions on data governance will increasingly intersect with the development of emerging technologies.

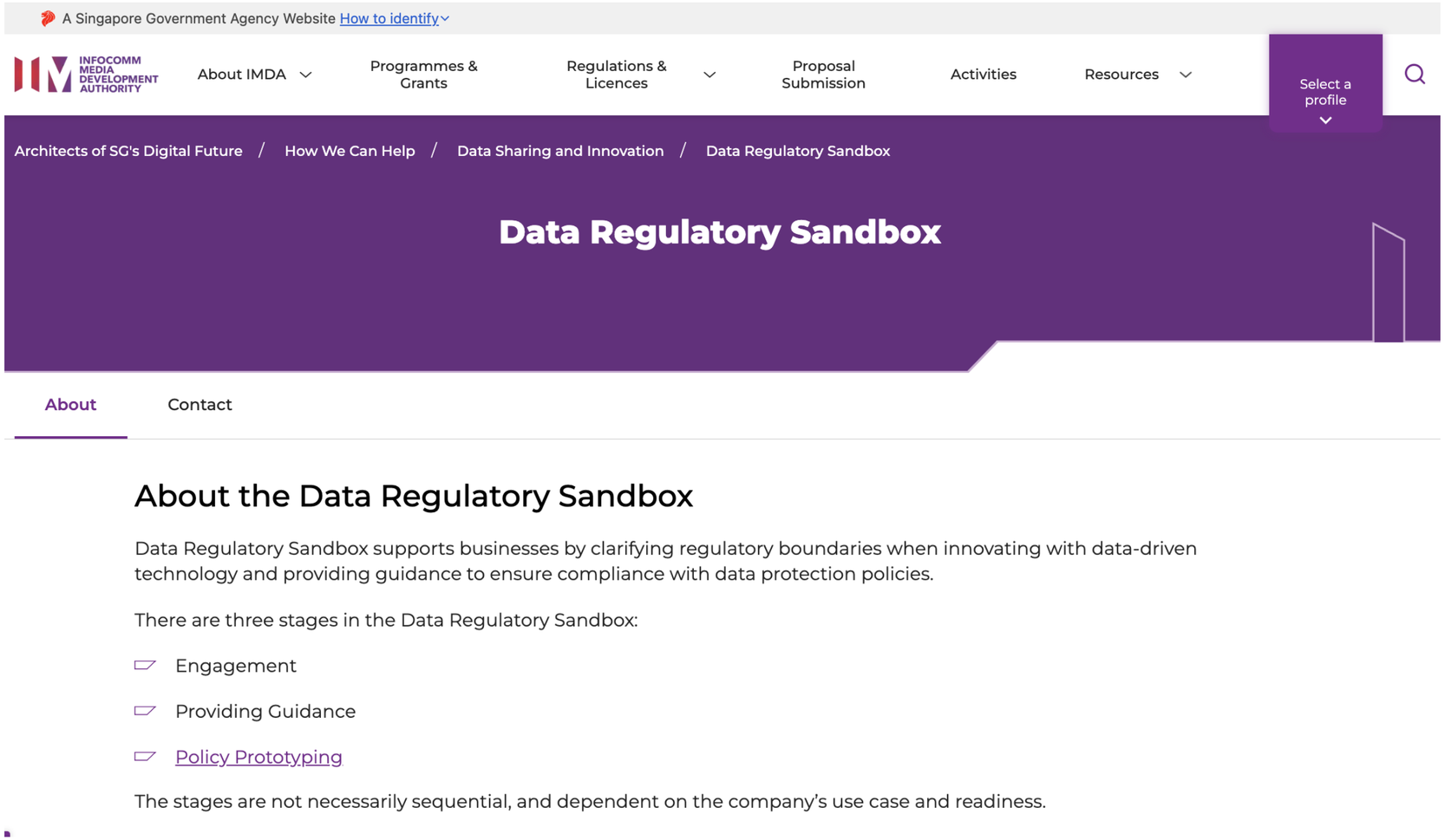
It is essential to envision data governance systems that are flexible, agile, and adaptable to the rapidly evolving realities of data usage.

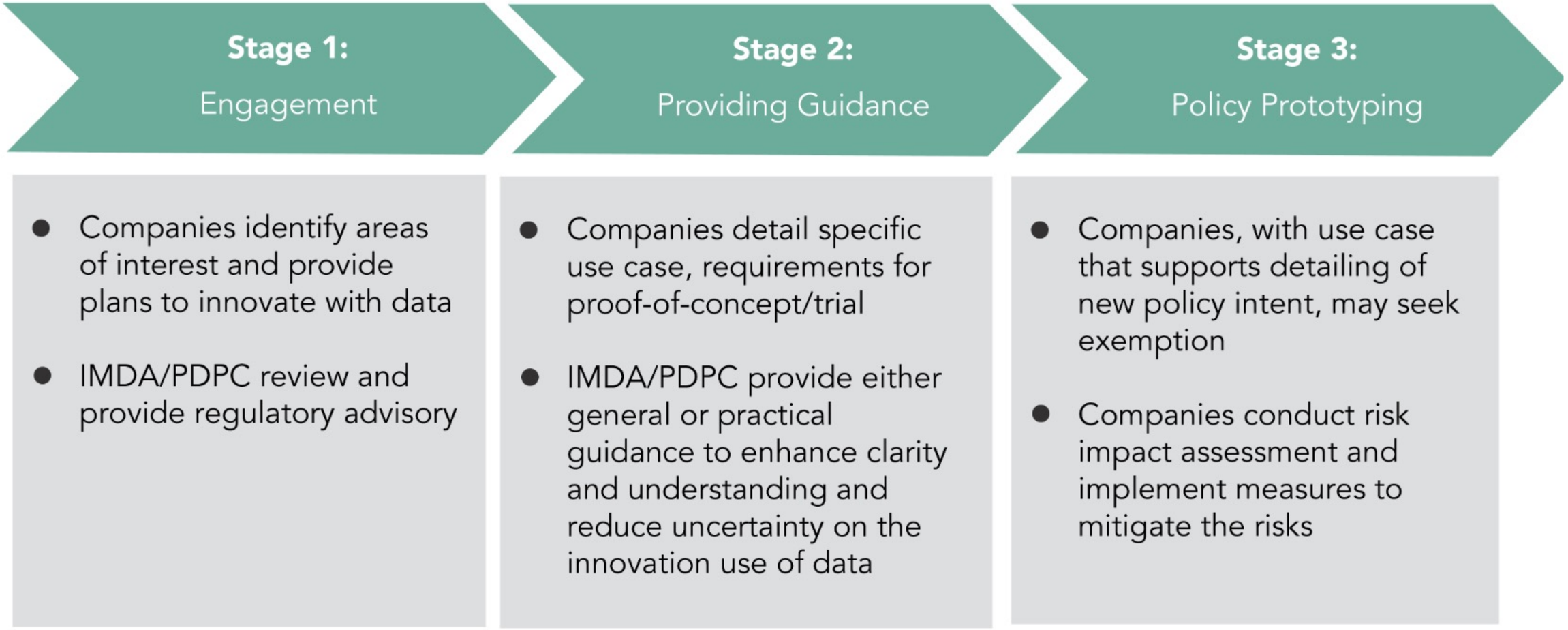
There is no one-size-fits-all approach; diverse governance models can coexist, tailored to specific policy objectives.

One of the key challenges lies in creating sustainable models that can endure changes in administration.

These models should prioritize the needs of a wide range of users, with a growing emphasis on empowering data owners or subjects, particularly in the case of personal data.

Bringing Regulatory Sandboxes and Data Governance Together



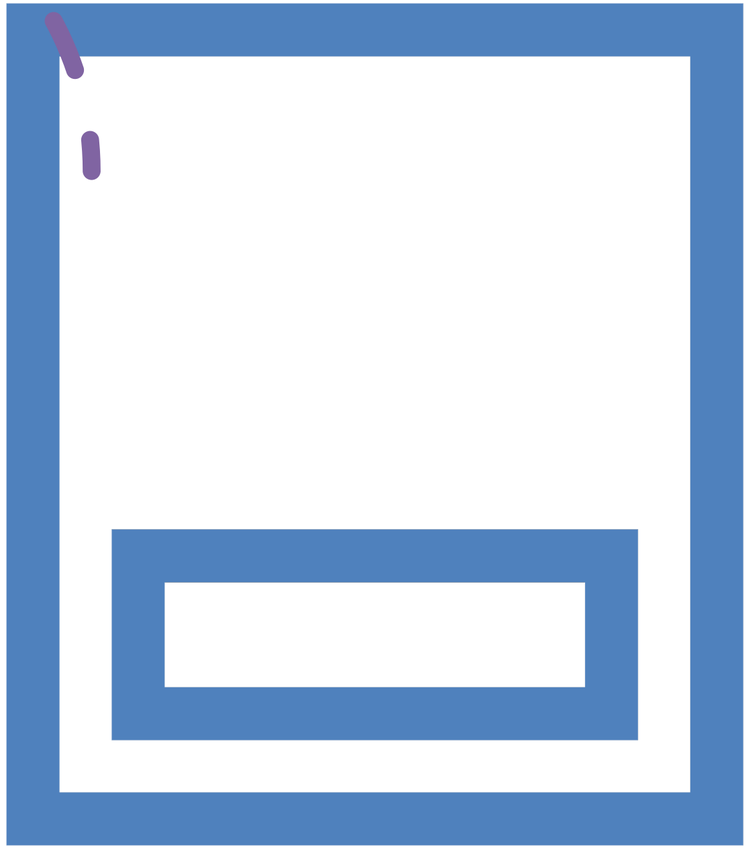

Stage 1:
Engagement
Stage 2:
Providing Guidance
Stage 3:
Policy Prototyping
Companies identify areas of interest and provide plans to innovate with data
IMDA/PDPC review and provide regulatory advisory
Companies detail specific use case, requirements for proof-of-concept/trial
IMDA/PDPC provide either general or practical guidance to enhance clarity and understanding and reduce uncertainty on the innovation use of data
Companies, with use case that supports detailing of new policy intent, may seek exemption
Companies conduct risk impact assessment and implement measures to mitigate the risks

Final Remarks

- Regulatory sandboxes have become an essential tool for policymakers seeking to navigate the uncertainty surrounding the governance of emerging technologies and data.

- These spaces are not only sites of experimentation but also of learning. For Caribbean countries to play a more prominent role in global technology discussions, generating these kinds of insights is critical.

- Data governance will require models that are diverse, adaptive, and agile. This underscores the importance of testing different governance approaches through regulatory sandbox environments.



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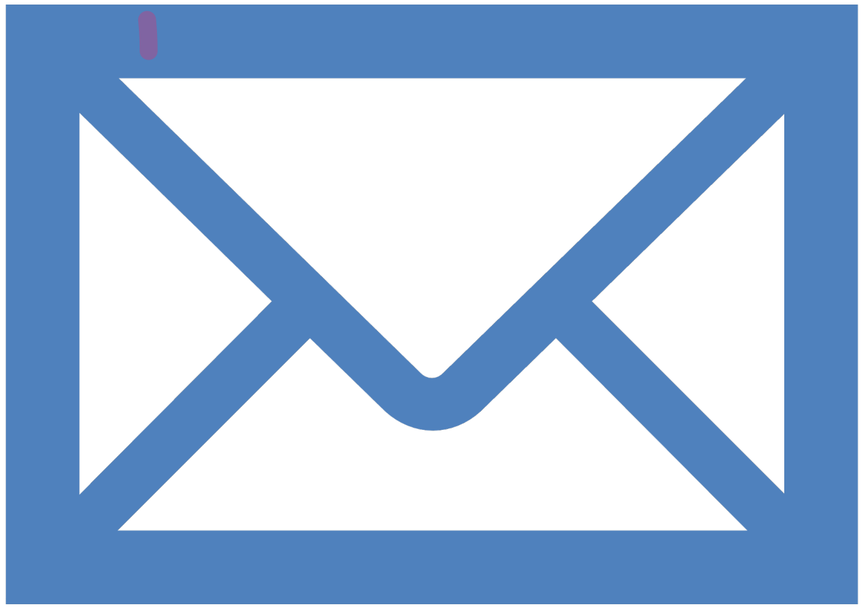

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