GSF
GLOBAL SANDBOXES FORUM

Insights Report

Inaugural Meeting
Rio de Janeiro

Brazil G20 Presidency, States of the Future Side Event
22 & 23 July 2024

DATASPHERE
INITIATIVE

ABOUT THE DATASPHERE INITIATIVE

The Datasphere Initiative is a think and do tank that catalyzes meaningful dialogues and co-creates actionable and innovative approaches to respond to data challenges and harness opportunities across borders. Our mission is to equip organizations to responsibly unlock the value of data for all. For more information, visit www.thedatasphere.org or contact info@thedatasphere.org.

ACKNOWLEDGEMENTS

ABOUT THIS EVENT REPORT

This report is an output from the discussions that took place during the Inaugural Meeting of the Global Sandboxes Forum which took place on July 22 and 23 in Rio de Janeiro in the context of Brazil's G20 Presidency. The agenda is included in the annex. We would like to thank and acknowledge all of the participants of the inaugural meeting who contributed to these insights: **Bertrand de la Chapelle**, Chief Vision Officer, Datasphere Initiative; **Guilherme Almeida**, Program Director, Ministry of Management and Innovation in Public Services of Brazil; **Laura Galindo**, AI and Privacy Policy Manager, Open Loop Meta; **Flávia Schmidt**, General Coordinator of Innovative Entrepreneurship and Open Innovation, Ministry of Development, Industry, Trade and Services of Brazil; **Luca Belli**, Director of the Center for Technology and Society at FGV Law School Rio, member of the Brazilian Presidency's National Cybersecurity Committee - CNCiber; **Anjoum Noorani**, General Consul in Brazil, Government of UK; **Pedro Peres Cavalcante**, Researcher at the Laboratory of Public Policy and Internet - LAPIN; **Alison Gillwald**, Executive Director, Research ICT Africa; **Fabiana Cebrian**, General Coordinator of Technology and Research, National Data Protection Authority of Brazil; **Armando Guio Español**, Executive Director, Global Network of Internet & Society Centers, Harvard University; **Armando Manzueta**, Digital Transformation Director, Ministry of the Economy of the Dominican Republic; **Amor MacLang**, Founding Member, International Digital Economies Association, and Convenor, Digital Philipinas; **Rodrigo Assumpção**, President, Dataprev; **Thiago Moraes**, National Data Protection Authority of Brazil; **Carolina Rossini**, Senior Advisor, Datasphere Initiative; **Bruno Portela**, Federal Attorney's, Advocacia-Geral da União; **Govind Shivkumar**, Director of Responsible Technology, Omidyar Network; **Chris Maloney**, Program Officer in the Gender Equity and Governance Program, William and Flora Hewlett Foundation; **Maria Marinho**, Professor in Innovation policy, Instituto Liberdade Digital; **Elisabeth Sylvan**, Affiliate, Berkman Klein Center for Internet & Society at Harvard University; **Carina Quirino**, Municipal Secretary of Urban and Economic Development of Rio de Janeiro; **Rafael Wanderley**, Director of the Innovation Lab, SMDUE Rio de Janeiro; **Marcelo Almeida**, Director, Associação Brasileira Empresas de Software - ABES; **Rafael Fassio**, State Prosecutor and Public Innovation expert, USP; **Michael Hennessey**, Operational Specialist, Interamerican Development Bank; **Guilherme Dominguez**, Co-founder, BrasilLab.

CONTENTS

EXECUTIVE SUMMARY

The inaugural meeting of the Global Sandboxes Forum (GSF) showcased sandbox experiences, elaborated the theory of sandboxes, explored the different types, challenges, and risks of sandboxes and highlighted the opportunities emerging in several sectors and regulatory levels.

Participants drew on the cross-border potential of sandboxes and also learnings from national and local applications. The event provided an opportunity for partners and supporters of the GSF to engage in dialogue on how this effort could explore the potential of sandboxes in the areas of artificial intelligence and sustainability and the tools and resources needed to promote responsible sandbox design and implementation.

"We often are at the edges of different conferences talking about sandboxes and post experimentations, trying to fit these learnings into different panels that we participate in. Today we come together across the globe from multiple fora where we have identified allies and the people that are trying to break the mold and think outside the box."

Lorrayne Porciuncula, Executive Director, Datasphere Initiative

The discussions fostered connectivity between international partners and identified key areas where the GSF can be useful for the emerging community of sandbox practitioners now and in the future. Elaborated in detail in this **Insights Report**, key findings include:

1. While many governments understand the increasing need for new regulatory methods and investments in digital technologies and markets, they are still struggling to foster the innovative practices and enabling environments necessary to ensure digital transformation benefits society.

2. Governments and the private sector have a growing interest in using sandboxes to tackle regulatory and operational challenges posed by digital technologies, however, knowledge, capacity and resources are limited and many would benefit from evidence and training.

3. Case studies of sandbox applications are emerging across sectors and geographies but experiences are missing consolidation and robust analysis.

4. Cross-border sandboxes could be helpful tools to tackle specific issues with international dimensions in the areas of AI and sustainability but for this to happen more trust and concrete prototyping is needed.

5. Professionals from the public and private sector, academia and civil society working on sandboxes, would like a space to connect, collaborate and share their expertise with policymakers.

1
INTRODUCTION

"This event is not only about hearing from experts but also hearing and understanding what we can build together. There's a community of practitioners that is out there doing experimental policy, creating new ways for you to share data, be it internationally, nationally, locally, and this community needs to be nourished."

Lorrayne Porciuncula, Executive Director, Datasphere Initiative

1. INTRODUCTION

On the occasion of the Government of Brazil's G20 Presidency, the Datasphere Initiative and the City of Rio de Janeiro held a side event to discuss the role of the Global Sandboxes Forum (GSF) in spearheading sandboxes to address local and global challenges. The event highlighted the potential of sandboxes to help governments deal with the complexities of the digital age and the need for a space for the public and private sector to share their knowledge and experience experimenting with emerging technology and regulatory tools.

Since its inception in 2022, the Datasphere Initiative has been exploring how sandboxes can support organizations in responsibly unlocking the value of data. In 2022 the Datasphere Initiative developed a report Sandboxes for Data: Creating Spaces for Agile Solutions Across Borders commissioned by the UK Government following their G7 Presidency. In 2023, with the support of the William and Flora Hewlett Foundation, the organization launched an Africa Forum on Sandboxes for Data, which catalyzed a pan-African community toward cross-border data exchange mechanisms supporting a single digital market by 2030. This initiative included an online course with modular capacity building on data governance and sandbox design and application. Across these efforts the Datasphere Initiative has convened events and consultations with stakeholders around the world to better understand and identify the actors using sandboxes and the areas from AI to sustainability where they can be helpful.[1] The Global Sandboxes Forum intends to bring these initiatives in an effort that would build a community of practice to demonstrate the unique potential of sandboxes and foster a more collaborative approach to address local and global challenges of the digital age.

While the benefits of sandboxes are slowly being understood, there are still a number of challenges:

• Sandboxes as a regulatory tool or an operational approach to sharing data are relatively unknown.

• There is little guidance on how to develop a sandbox.

• There are no assessment tools to measure or review successful and responsible sandbox initiatives.

• There is a lack of coherent or structured spaces for community building to share sandbox experience and knowledge.

The inaugural meeting provided an opportunity to connect key supporters and experts working on sandboxes to explore these issues and identify how sandboxes can responsibly unlock the value of data at local, national, regional and global levels. Attendees contributed their own experiences with sandboxes and identified policy areas and sectors where the GSF could help.

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1 For example: UNCTAD eWeek (Geneva 2023), IGF (Kyoto 2023), T20 Brazil (online, 2023)

Photo: Jeff Augusto

"I just love to see the boldness and the ambition of the Global Sandbox Forum. Because this needs to be pervasive. This momentum, this vision, this ambition for change in how government works should not be limited to a city, even an innovative city, such as Rio, it should not be limited to a ministry, a ministry of innovation in public services. But it should become a trend, it should become a possibility."

Guilherme Almeida, Program Director, Ministry of Management and Innovation in Public Services of Brazil

This **GSF Insights Report** shares the intelligence and recommendations gathered during the inaugural meeting's panels, workshops and presentations. The report also includes reference to the three working papers shared at the event exploring practical proposals for prototypes of cross-border sandboxes in the areas of AI and sustainability and an assessment framework for responsible sandbox design and implementation.

"We believe that this is a huge opportunity to foster sandboxes to allow the experimentation"

Flávia Schmidt, General Coordinator of Innovative Entrepreneurship and Open Innovation, Ministry of Development, Industry, Trade and Services of Brazil

2

SANDBOXES IN THE CONTEXT OF THE GLOBAL DIGITAL AGENDA

"One of the objectives that we have in the context of the Global Sandboxes Forum is to have sub efforts regionally, because each of the continents have their own organization and practice of sandboxes."

Bertrand de la Chapelle, Chief Vision Officer, Datasphere Initiative

One of the objectives of the inaugural meeting was to identify how the GSF and sandboxes could help spur agile frameworks for data flows and boost global collaboration in the digital age. Participants were invited to contribute their experience with international data policy debates and offer examples where the GSF could be helpful. The following observations were put forward:

1. **Latin America and the Caribbean needs a regional approach to data governance**

2. **Governments are increasingly championing national policies for data-driven economies**

3. **Digital public infrastructures can reduce inequalities and sandboxes could help test them**

4. **The risk of failure in the public sector can make policy innovation challenging**

5. **Sandboxes can help governments be proactive rather than reactive**

Latin America and the Caribbean needs a regional approach to data governance

Data governance has been high on Brazil's G20 agenda. Another issue amongst the policy debates especially within civil society has been the absence of a Latin America regional approach to data governance. Some have been calling for an inter-american convention similar to the European 108 convention or the African Union Malabo Convention. This need has also been shared in the context of trade where Brazil's President Lula stated that there is a need for a Latin American regional approach to data governance and AI regulation, at a recent Mercosur summit. Building on the learnings from the Africa Forum on Sandboxes, the Datasphere Initiative intends to host regional efforts through the GSF to help countries explore interoperability and coherent sandbox design across their regions.

Governments are championing national policies for data-driven economies

In the case of Brazil, efforts are focused on leveraging data to boost Brazilian competitiveness, designing national policies to spur a data-driven innovation through data spaces to support Brazilian industry.

> *"As long as we have data protection legislation which is certainly needed, we also need safe spaces to work with data for purposes and within guidelines and with safeguards."*
>
> **Guilherme Almeida, Program Director, Ministry of Management and Innovation in Public Services of Brazil**

The Government of Brazil is exploring the possibility of creating "data spaces", a reference to language being used in the European context. While government ministries are defining what "data spaces" mean in the Brazil context, there is an appetite to design these models to increase innovation and competitiveness for Brazilian firms.

> *"Digital government is very, very important, especially when you have rising inequalities, not only here in Brazil, but around the world. Building government citizen relationships and enabling high quality public service is important."*
>
> **Flávia Schmidt, General Coordinator of Innovative Entrepreneurship and Open Innovation, Ministry of Development, Industry, Trade and Services of Brazil**

Digital public infrastructure can reduce inequalities and sandboxes could help test

The Government of Brazil is prioritizing "digital government" and seeks to advance the promise of Digital Public Infrastructure (DPI). In the context of the G20, this points to the legacy of the Indian Presidency in 2023 which spearheaded DPIs as a government priority. India's G20 Presidency put a very strong focus on key dimensions of DPIs particularly regarding digital identity, economic access and bank infrastructure.

> *"To make government useful, transformative, and relevant for people, technology is a great part of that."*
>
> **Guilherme Almeida, Program Director, Ministry of Management and Innovation in Public Services of Brazil**

> *"We believe that data and evidence, when used in policymaking, leads to better policy outcomes that enhance people's well-being."*
>
> **Chris Maloney, Program Officer in the Gender Equity and Governance Program, William and Flora Hewlett Foundation**

> *"I believe, the most important task facing all societies and all governments is infrastructure as important as any of the preceding classic infrastructures. And it is a basic condition for the government to operate. And it's a basic condition for a society to exist. And that's what we're talking about. When we talk about data. So the whole sandbox thing, when you talk about data, it becomes incredibly important."*
>
> **Rodrigo Assumpção, President, Dataprev**

One of the big challenges that is emerging around DPIs among other issues is privacy and the implementation of privacy enhancing techniques. While some governments in the G20 are looking towards the European Union for inspiration in the context of the General Data Protection Regulation and Digital Services Act, questions on the feasibility and effectiveness of their implementation remain.

> *"DPIs could go even further and contribute to some very pressing challenges, worldwide in fields such as climate change, food and security, and the health sector. So advancing sandbox frameworks for DPI's could allow for the interoperability and transfer of data between countries and push for cross-border innovation and some coordinated solutions for global issues."*
>
> **Pedro Peres Cavalcante, Researcher at the Laboratory of Public Policy and Internet - LAPIN**

Sandboxes could play a role in helping governments set-up and test DPIs to learn from mistakes and anticipate risks around inclusivity and interoperability. Digital public infrastructure often faces challenges regarding interoperability both within a country and between countries. As the G20 continues to discuss DPIs more broadly and work develops to build capacity for governments in their DPI journey, sandboxes could be leveraged as a common tool to help with responsible design and implementation.

> *"For digital infrastructure, you need these sandboxes to experiment and think about what are the positive and negative attributes and second order consequences that come from these sandboxes that could be used in one geography, but could be translated and harmonized across geographies globally."*
>
> **Govind Shivkumar, Director of Responsible Technology, Omidyar Network**

The risk of failure in the public sector can make policy innovation challenging

Emerging technologies and their application often require new types and iterations of policymaking that impact different government ministries and sectors of the economy and communities across society. While some public officials recognize a need to govern differently, having the resources and mind-set to experiment can often be challenging.

> *"Inventing is not always what is being rewarded spontaneously, because the risk of failure is always going to be there. There is a need to de-risk something that would help people understand how to do it through better documentation of what the experiences have been."*
>
> **Bertrand de la Chapelle, Chief Vision Officer, Datasphere Initiative**

The GSF would provide a space for governments to experiment and share failures and lessons learned to help spread knowledge not only on best practices. As governments have more opportunities to share and collaborate this could also inspire innovation and ambition to address the challenges of emerging technologies more effectively.

> *"I have learnt how challenging it is to make government work and how crucial experimentation is in making this happen. Safe spaces are what sandboxes are about."*
>
> **Guilherme Almeida, Program Director, Ministry of Management and Innovation in Public Services of Brazil**

Sandboxes can help governments be proactive rather than reactive

Governments are often playing catch-up when it comes to regulating in the digital age. For many, acquiring the necessary technical competencies to understand the technology and how it is interacting with the economy and society requires additional resources and knowledge.

> *"In this government, we're trying to move from an approach that is, wait and see what's happening around the world to test and learn together with other economies."*
>
> **Flávia Schmidt, General Coordinator of Innovative Entrepreneurship and Open Innovation, Ministry of Development, Industry, Trade and Services of Brazil**

Sandboxes can help gather learnings and insights on how new regulatory challenges and technology are emerging in a specific context and controlled environment. This may help educate governments on predicting other issues and externalities of regulatory models and tools.

> *"Sandboxes exist when you have a new evolving sector, and you have lack of clarity about how best to govern that. And you want to come up with a co-created way of developing the regulation that will oversee it. So in that sense, AI is a classic sort of area where all of those factors come into play."*
>
> **Anjoum Noorani, General Consul in Brazil, Government of UK**

Sandboxes can be used both in the early stages to engage the actors that will be needed in implementation, and that likewise they are follow-up sandboxes for the implementation of legislations.

> *"Sandboxes can be very relevant when we come to think about the ever increasing pertinence of AI and the digitalization of the public sector."*
>
> **Pedro Peres Cavalcante, Researcher at the Laboratory of Public Policy and Internet - LAPIN**

3
NATIONAL AND LOCAL SANDBOXES EXPERIENCES

"It really takes a step-by-step approach to trying to understand what is the best approach to do the sandbox. It's sandboxing the sandbox in itself, and taking one step at a time also to continue following the Brazilian experience and tradition of multi-stakeholder engagement and consultation."

Lorrayne Porciuncula, Executive Director, Datasphere Initiative

There are many examples of governments using sandboxes and gaining helpful lessons from their implementation. Sandboxes as a tool for digital transformation and policymaking is also an emerging area of academic research and guidance is developing on the types of regulatory capacities and resources governments need to embark on such efforts.[2] The private sector is also developing useful insights in how to test new technologies and data management systems through new regulatory approaches.

The Datasphere Initiative intends to bring together these experiences and resources through the GSF by working on an inventory of sandbox case studies and experiences to foster an understanding of the types of sandboxes emerging around the world. The inaugural meeting provided an opportunity for participants to present their national and local sandbox experiences including concrete case studies from Brazil and the Dominican Republic:

Experience #1 - National Data Protection Authority of Brazil AI sandbox

Brazil's National Data Protection Authority is in the design phase of their pilot project for a regulatory sandbox. The project takes place within their research unit which functions as a think tank within the authority itself. This set-up allows technology teams to reach out to the authority unit providing both internal and external feedback on the impacts of technology on data protection.

There is an ongoing debate on artificial intelligence regulation in Brazil including a bill. However, besides legislative proposals, Brazil has also launched its national strategy for artificial intelligence which leverages the country's technology, innovation and business to address Brazil's challenges, to create new opportunities for citizens in the innovation ecosystem. The legal frameworks allow for the Brazilian regulatory authorities to develop experimental regulations, environment and, if needed, to waive the application applicability of some norms during the experimentation. While the suspension of legal provisions is not always necessary, the bill includes provisions which address the requirements for algorithmic transparency. In this context the pilot project of the regulatory sandbox by Brazilian DPA.

The sandbox implementation will identify and develop best practices for integrated algorithmic transparency into AI systems, by testing different approaches, methodologies and techniques within the sandbox. The DPA will then be able to assess the effectiveness and efficiency.

"It is expected that at the end the sandbox will be able to share data protection best practice among participants and other stakeholders as well as provide insights to the DPA regulatory agenda. The DPA believes that it will be able to provide a trustful and balanced legal environment where obligations respect the fundamental rights of data subjects."

Fabiana Cebrian, General Coordinator of Technology and Research, National Data Protection Authority of Brazil

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2 A. Guio (2024), *Regulatory sandboxes in developing economies: an innovative governance approach*, Project Documents(LC/TS.2024/59), Santiago, Economic Commission for Latin America and the Caribbean (ECLAC).

The DPA initiated an open consultation to understand the perspectives of different sectors. During the consultation a total of 71 contributions were received. Of these, 29 were from entities or groups who represented the economic sector, 6 from the public sector, 11 from civil society organizations, 6 from the academic sector, and 19 were identified as independent contributions from citizens. Of the total 66 contributions were national and 5 were international. The majority of the contributions provided in response to the 70 questions posed in the consultations. In total, over a thousand responses were received that have been analyzed and will soon be published.

Experience #2 The Dominican Republic finance and telecommunications

"I consider that sandboxes are very valuable and definitely something that should be adopted for policymaking."

Armando Manzueta, Digital Transformation Director, Ministry of the Economy of the Dominican Republic

Since 2017 the Dominican Republic has been experimenting with certain anticipatory regulation mechanisms starting with an innovation program at the central bank which identified tech startups to work closely with the bank. The project worked to enhance understanding of emerging business models and design new products that will be part of the financial system. Since then, the bank has been working very closely with other Regulators as well, and in 2022 decided to establish an anticipatory regulation body as a financial innovation hub. While this effort may not be defined as a sandbox it allows entrepreneurs and interested companies creating Fintech products to connect with the financial sector and understand the regulatory landscape. Building on these efforts a financial sandbox is envisioned in the future however, implementation questions remain for the regulator.

However in the telecommunications sector, the regulator has set up a sandbox and is running its first cohort. There is an open call out for the selection of the products and companies that will be part of this, data from this first cohort will be used to assess how these products and companies and projects have behaved during the trial process. Alongside this effort the government is working on establishing a data strategy for the sector. One of the goals is to develop high quality data for public policy making and add more value to that same data as well using different technologies such as AI. The government envisions developing infrastructure to improve, not just the quality of data, but also to regulate the mechanisms on how data is being collected, stored and classified.

Experience #3 Sandbox.Rio

Sandboxes are also being designed and leveraged at local levels and in some cases have proven a useful tool for municipalities to test public infrastructure or support local start-ups and entrepreneurs.

> *"We must empower public servants and public bodies to understand how they can use innovation to solve problems they face."*
>
> **Rafael Fassio, State Prosecutor and Public Innovation expert, USP**

Sandbox.Rio is an initiative of the Secretariat of Economic Development, Innovation and Simplification of the City of Rio de Janeiro. Through it, products, services or processes that do not fit into the pre-existing regulatory scenario can be tested in a controlled environment, through temporary authorization granted by the City. Any legal entity with the technical and financial capacity to execute projects eligible for the sandbox, such as companies, research institutes and other entities focused on promoting technological innovations.

> *"The goal of Sandbox Rio is to reach not only the big companies in Brazil, but also the startups that have smaller projects and assess how we can accelerate this project."*
>
> **Rafael Wanderley, Director of the Innovation Lab, SMDUE Rio de Janeiro**

The tests carried out collect information that helps the City Hall understand the innovations, ensuring a regulatory framework that is receptive and compliant with new technologies. In addition, the database generated during the testing period helps public managers design public policies that are of interest to the City. The initiative helps to reduce costs and time for innovative ideas to reach the market, create greater ease in obtaining financing for innovative projects, due to greater legal security, provide an interlocutor with government agencies essential for the development of the activity at the municipal level.

These types of local experiences provide helpful learnings for governments and private sector interested in developing sandboxes and case studies point to some of the challenges local governments and small and medium enterprises can face when participating in or setting up a sandbox. As noted above, the Datasphere Initiative has a database of such case studies and the GSF will be developing a tool and resources to make this intelligence and evidence available.
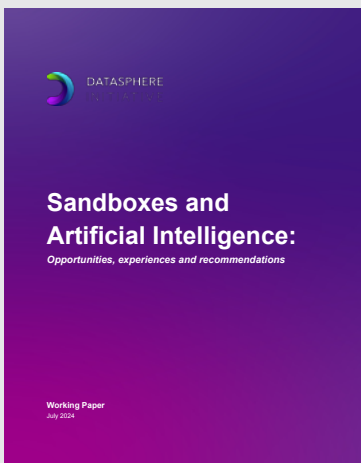
Photo: Jeff Augusto

4

CROSS-BORDER SANDBOXES

"The GSF would enhance cross-border collaboration and provide a platform for collaborations, allowing us to share insights, best practices and the innovative solutions."

Fabiana Cebrian, General Coordinator of Technology and Research, National Data Protection Authority of Brazil

Typically policy makers are concerned about their own territories focusing on the constraints of their legal mandates. In the digital age, many issues such as artificial intelligence and climate change have a clear cross-border dimension. With this in mind it is important to consider how sandboxes can not only be applied within the national context, but also an international one in the context of specific and concrete global issues.
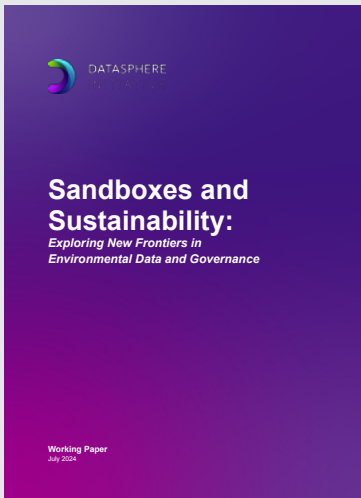
Ahead of the inaugural meeting, the Datasphere Initiative prepared three working papers to identify how cross-border challenges in the areas of artificial intelligence and sustainability could benefit from using sandboxes to unpack and understand appropriate solutions. Participants at the inaugural meeting discussed these issue areas and identified examples of how a sandbox approach could help.

Sandboxes and AI : Opportunities experiences and recommendations (Working paper)

The working paper explores the potential of sandboxes as important tools for the regulation and development of AI and data-driven technologies. Sandboxes offer a valuable solution for experimental and anticipatory governance of AI, providing secure environments in which innovators and regulators can come together to safely experiment with new technologies, practices, and business models. Sandboxes can enable iterative testing, reduce uncertainty, enhance competition, and f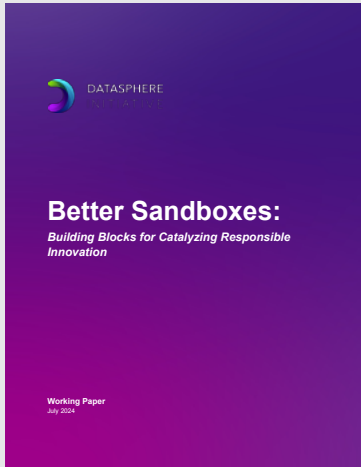oster collaboration between innovators and regulators. The working paper reviews the diverse implementations of sandboxes on AI applications, from regulatory to operational, and highlights their potential to foster innovation while ensuring compliance with regulations and align with societal values and ethical standards. Policy recommendations include enhancing capacity building among stakeholders, standardizing data governance frameworks, integrating privacy-enhancing technologies, supporting cross-sectoral and cross-border sandboxes and establishing a Global Sandboxes Forum. These measures aim to create robust, adaptive, and collaborative sandbox frameworks that address the complexities of AI development and deployment.

Sandboxes and sustainability: Exploring new frontiers in environmental and data governance (Working paper)

The world is facing an unprecedented sustainability and environmental crisis. Rising global temperatures, warming oceans, shrinking ice sheets and rising sea levels threaten ecological and social equilibrium. Addressing these problems requires solving challenges such as the lack of comprehensive data, the slow pace of innovation, and the availability of spaces for agile collaboration and exploration. To address the climate crisis, data must become an enabler and interoperability of solutions need to become a reality across borders. This requires creating experimentation spaces where all stakeholders can participate and test current data, new data collection methods, solutions and business models. Sandboxes can play a crucial role in fostering this innovation and in addressing the sustainability crisis the world is facing. This working paper analyzes the situation, reviews key challenges of environmental data and governance, potential avenues for application of sandboxes and highlights examples of current innovation in this space. It proposes ideas for environmental data sandboxes that could be implemented across different geographies and contexts. Finally, the paper offers policy actions and recommendations for successful implementation.

A key theme throughout the inaugural meeting was the lack of guidance available for policy actors to design and implement a sandbox. Many participants shared that there is still a lack of understanding on how to develop and implement an and responsible sandbox. While there are indications based on past experiences what works and what doesn't, much more evidence is needed to understand what that means, and what those different tools can offer to us. The Datasphere Initiative prepared a working paper to showcase what an Assessment Framework for a Responsible Sandbox could look like. This proposal which will be further elaborated within the GSF seeks to respond to the desire to ensure sandboxes are responsible and effective.

Better sandboxes: Building blocks for catalyzing responsible innovation (Working Paper)

Sandboxes are powerful tools to foster innovation within controlled environments, enabling safe exploration and development and effective utilization of data-driven technologies. Government regulators are implementing sandboxes worldwide, and these initiatives vary significantly in structure, purpose, and impact, tailored as they are to the specific needs and conditions of different jurisdictions. This diversity, while valuable, presents challenges in terms of harmonization and cross-jurisdictional learning. Common challenges in sandbox implementation include their resource-intensivity and inconsistent operational practices, which can hinder their effectiveness and scalability. Furthermore, the success of sandboxes largely depends 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 to learn from other countries' experiences. To optimize the potential of sandboxes and overcome existing challenges, it is essential to develop resources that enhance interoperability of learnings and practices and ultimately foster collaboration across jurisdictions. Key resources could include: establishing a common assessment framework to evaluate sandboxes; developing a Toolkit for responsible sandbox development; and creating a platform for decision-makers and practitioners to exchange best practices, address challenges and promote cooperation on sandboxes (the Global Sandbox Forum). These resources would help ensure that sandboxes provide a level playing field, enhance consumer protection, foster human rights and government transparency, and facilitate innovation.

5
SANDBOX GAPS AND CHALLENGES

"I believe that there is really a great role through experimentation, beyond regulatory testing, beyond improving frameworks. It's also this part of collaboration and working together, learning together, understanding what tools and opportunities are needed to advance safe, secure development of AI."

Laura Galindo, AI and Privacy Policy Manager, Open Loop Meta

The inaugural meeting identified a number of capacity gaps and common challenges faced by the public and private sector as well as civil society and academia when designing or participating in sandboxes. Echoing some of the insights shared within the Africa Forum on Sandboxes, these insights will be helpful in structuring GSF priorities and outputs. Key gaps and challenges included:

1. **Governments need guidance on when and how to design sandboxes**

2. **Governments can learn from other sandbox experiences but need a safe space to share**

3. **Interoperability of sandbox design and implementation is challenging**

4. **Legal challenges can can hinder sandbox experimentation**

5. **Lower middle income countries often miss out on private partnerships**

6. **SMEs and municipalities often lack resources to participate in sandboxes**

7. **It can often be complex to implement sandboxes in existing policy making process**

Governments need guidance on when and how to design sandboxes

While sandboxes can be helpful in a range of contexts and policy areas in some cases there is also a need to ensure their implementation is designed under conditions where participants have constraint, and an understanding of the institutional endowments needed to oversee them effectively.

> *"Evidence-based insights that can really inform and advance policymaking, especially in an area such as AI and other emerging technologies, are really really hard to keep pace with."*
>
> **Laura Galindo, AI and Privacy Policy Manager, Open Loop Meta**

There is concern that sandboxes can sometimes be used as mechanisms for circumvention of regulation or to promote a lack of regulation.

> *"One needs to be very clear how they are and can be used. So I think if one looks at some of the examples where they've been a success. These are very often in environments where you already have considerable development of institutional processes."*
>
> **Alison Gillwald, Executive Director, Research ICT Africa**

"There seems to be some kind of allergy towards the word sandboxes, because sandboxes in our region have largely been an incestuous affair between industry and regulatory, so it's not as inclusive."

Amor MacLang, Founding Member, International Digital Economies Association, and Convenor, Digital Philipinas

Sandboxes may themselves need to be designed within an array of regulatory instruments and at a national and regional level. At the same time, regulatory institutions need to have the capacity to design and initiate a sandbox effectively to ensure outcomes ultimately support the interest of the public and are publicly accountable.

"I think it also needs to be very much in the context of public value, of public systems that are, you know, publicly interested and publicly accountable. And they're not happening with sort of, you know, lobbying access that highly resourced companies have to these."

Alison Gillwald, Executive Director, Research ICT Africa

The GSF could provide an opportunity to identify and provide assessment frameworks and guidelines for governments on sandboxes to avoid circumvention and identify the instruments that need to be in place to set-up and design an effective regulatory sandbox which is inclusive and multistakeholder through consultative processes.

"What is very important: to understand about sandboxes, it doesn't happen by magic. You need an enabling environment."

Luca Belli, Director of the Center for Technology and Society at FGV Law School Rio, member of the Brazilian Presidency's National Cybersecurity Committee - CNCiber

"We need quality sandboxes. That means that we need sandboxes that really are well designed, well implemented, providing the elements that we would like to see from sandbox says we should avoid having a sandbox for the sake of of a sandbox."

Armando Guio Español, Executive Director, Global Network of Internet & Society Centers, Harvard University

Governments can learn from one another but need a safe space to share

Sandboxes themselves provide a learning experience for the private and public sector and the GSF could build on this learning journey further by by enabling the sharing of lessons and experiences across countries and sectors..

> *"I think that having regular meetings would be fantastic, but also to create some other spaces where we can actually discuss the advances that we have been making or not, just the advances. If you have any issue, or to find ways collectively on how to face it, or how to solve many of the problems that we're going to face."*
>
> **Armando Manzueta, Digital Transformation Director, Ministry of the Economy of the Dominican Republic**

While every country will end up with different regulations, because each sandbox will be culturally contextually different, learning from others and understanding different cases could help foster interoperability among country approaches.

The GSF could include a multistakeholder, consultative Experts committee which would follow the implementation phase of the sandbox pilot and would further enhance the participation and decision making processes. The committee would be able to identify potential risks, suggest improvements and even ensure that the sandbox aligns with best practices and emerging trends in the field of data protection.

> *"You have to build in principles of sustainability. You have to make sure that it's transformative. You have to crucially make sure that it is inclusive, and you have to work out a way of defining the regulation in such a way that it is responsible."*
>
> **Anjoum Noorani, General Consul in Brazil, Government of UK**

The GSF intends to draw from those experiences to produce guidelines, toolkits, and best practices that could help spread lessons to larger audiences.

> *"I think that it is essential that other actors beyond regulators are effectively included in this process."*
>
> **Pedro Peres Cavalcante, Researcher at the Laboratory of Public Policy and Internet - LAPIN**

Interoperability of sandbox design and implementation is challenging

As sandboxes are being used in different sectors and national contexts, learnings and applications are becoming very diverse. This leads to challenges around interoperability in sandbox applications and design. In addition, as a body of evidence and research emerges through efforts such as the Global Sandboxes Forum, how to make this knowledge interoperable and mainstream will be very important. Pairing global, national and local experiences with sandboxes and bringing forward tangible and common learnings and resources will be necessary.

> *"How are we going to share this and how is this knowledge going to be shareable in some way going to be mainstream in a way which basically we are able to use it, and that to be interoperable?"*
>
> **Armando Guio Español, Executive Director, Global Network of Internet & Society Centers, Harvard University**

Legal challenges can can hinder sandbox experimentation

Sometimes when sandboxes are being proposed governments are finding that once inspection of the granularity of the regulations has taken place, many questions emerge including obstacles around some of the legal entities and interplay of jurisdictions. Governments may need to explore introducing a new law or decree to enable the establishment of a sandbox.

> *"We still have a lot of challenges on the implementation side, and basically on how the sandboxes are effectively implemented."*
>
> **Armando Guio Español, Executive Director, Global Network of Internet & Society Centers, Harvard University**

Lower middle income countries often miss out on private partnerships

Some markets are not attractive to entrepreneurs and companies who are developing the latest technologies. This means that lower middle income countries can miss out on developing a sandbox to test emerging technology with their regulatory environments creating limitations or missing potential. The GSF intends to prepare toolkits and capacity building training for countries who would like to develop a sandbox and there is an emerging area of research in this space which could be consolidated.

"I think the Forum is directly building the capacity of policymakers to understand the power of data, how to use it, and most crucially think about it in a cross border way and through the lenses of sound data, governance, policy and regulation, and in collaboration with key civil society stakeholders."

Chris Maloney, Program Officer in the Gender Equity and Governance Program, William and Flora Hewlett Foundation

SMEs and municipalities often lack resources to participate in sandboxes

Designing and participating in a sandbox can be resource heavy not only from a financial perspective but also considering time and capacity. For small and medium enterprises or local governments the prospect of engaging in a sandbox can be complicated as staff time and other urgent projects take priority.

"There's a lot of transaction costs associated with regulatory sandboxes. And it's important to think about how those transaction costs are incurred by municipalities"

Michael Hennessey, Operational Specialist, InterAmerican Development Bank

"Some companies don't have the structure to be part of this process because they don't have the funds to do so."

Guilherme Dominguez, Co-founder, BrasilLab

It can often be complex to implement sandboxes in existing policy making process

It can be unclear how to insert a sandbox into an existing policy making process and governments may struggle with introducing a new mode of regulatory testing or multistakeholder consultation.

"We need to involve all the societies, whether it's like advanced societies, or maybe there are some societies that are in underserved or unserved societies. We should give them a chance to cooperate, to collaborate and raise their voice through this novel approach."

Syed Iftikhar, Director of Policy Innovation, DCO

6
CONCLUSION

"Thinking outside the box is really an enabler for concrete action on very concrete challenges that we have both locally and globally. This is an invitation for the GSF to be the space to think with others about common problems and find allies to solve those problems as well."

Lorrayne Porciuncula, Executive Director, Datasphere Initiative

The inaugural meeting demonstrated the value and the demand for the Global Sandboxes Forum. The discussions fostered connectivity between international partners and identified key areas where the GSF can be useful for the emerging community of sandbox practitioners now and in the future. Key takeaways for the GSF to help to address and build on include:

1. While governments are understanding the increasing need for new regulatory methods and investments in digital technologies and markets, they are still struggling to foster the innovative practices and enabling environments necessary to ensure digital transformation benefits society.

2. Governments and the private sector have a growing interest in using sandboxes to tackle regulatory and operational challenges posed by digital technologies, however, knowledge, capacity and resources are limited and many would benefit from evidence and training.

3. Robust case studies of sandbox applications are emerging across sectors and geographies but experiences are missing consolidation and analysis.

4. Cross-border sandboxes could be helpful tools to tackle specific issues with international dimensions in the areas of AI and sustainability but for this to happen more trust and concrete prototyping is needed.

5. Professionals from the public and private sector, academia and civil society working on sandboxes, would like a space to connect, collaborate and share their expertise with policymakers.

The **GSF brochure** shared ahead of the inaugural meetings includes the envisioned work plan and outcomes of the GSF. Participants at the inaugural meeting summarized its activities around three pillars: Connect, Inform and Catalyse.

CONNECT	**INFORM**	**CATALYZE**
The GSF will provide a space for people to come together to share experiences, ideas, and challenges but also good practices around sandboxes.	The GSF will help document successful sandbox experiences. Documentation of implementations and best practices will help develop the tools and capacity resources to empower stakeholders to build their own successful sandbox experiences.	The GSF will bring people together with the appropriate evidence and the appropriate methodology. Through practical workshops and prototyping around the world, the GSF will spark reflection and concrete building of solutions to address well defined problems.

Immediate next steps

The Datasphere Initiative is actively fundraising to realize the ambition of GSF. To prepare the groundwork a number of GSF activities and outcomes are set for the coming months.

1. Evidence building

The Datasphere Initiative has built a large database of meaningful sandboxes. This research will expand through crowdsourcing more case studies to showcase the good practices as well. The goal is to provide a common resource for everyone who is pioneering the implementation of sandboxes.

2. Capacity building

Building on work already undertaken in its working paper on a sandbox assessment framework, the Datasphere Initiative would like to develop a toolkit with good practices. Based on recommendations made at the inaugural meeting, the Datasphere Initiative will also explore certification mechanisms on sandboxes. This work will build on the work and online course developed through the Africa Forum on Sandboxes for Data which sought to equip policy actors with the awareness and skills to participate in sandboxes.

3. Outreach

Another key goal of the GSF is to raise awareness on the potential of sandboxes to address concrete challenges in the digital age. The Datasphere Initiative will continue to convene and organize a series of thematic, regional and global events, both online and in person.

4. Community building

At the heart of the GSF will be its community and developing a community of practice on sandboxes is a fundamental goal. To foster connectivity and interactions the Datasphere Initiative has set up a whatsapp group with interested practitioners and will also be launching a LinkedIn group and and an expert group to serve as a space for network building and organic interactions.

5. Support

The Datasphere Initiative would like to help people that are in different stages of development of sandboxes be at a very early stage in terms of even thinking on what kind of sandbox it is, what is the problem that they want to tackle, but also in terms of helping them design and implement.

ANNEX - AGENDA

22 JULY 2024 - MONDAY

13:30 - 14:15

Opening Session

During the opening session, the event organizers, hosts and high-level representatives will share introductory remarks. Participants will have the opportunity to learn more about theDatasphere Initiative and its plans to launch a Global Sandboxes Forum, as well as efforts by partners in catalyzing sandboxes in different geographies and topics.

Opening Remarks:

- **Lorrayne Porciuncula**, Executive Director, Datasphere Initiative
- **Guilherme Almeida**, Program Director, Ministry of Management and Innovation Public Services of Brazil
- **Laura Galindo**, Open Loop Meta
- **Carina Quirino**, Unsersecretary for Regulation and Business Environment of Rio

14:15 - 15:30

Session 1: Agile frameworks for data flows and the digital agenda - Global policy context and the institutional landscape

In this session speakers from the G20, T20 and B20 will share their perspectives on current global debates on sandboxes. Speakers will be invited to share updates on discussion within Brazil's G20 presidency. The discussion will identify opportunities and gaps the Global Sandboxes Forum could address to boost global cooperation and innovation around data flows and the digital agenda.

Moderator: Bertrand de la Chapelle, Chief Vision Officer, Datasphere Initiative

Speakers:

- **Flávia Schmidt**, General Coordinator of Innovative Entrepreneurship and Open Innovation, Ministry of Development, Industry, Trade and Services of Brazil
- **Luca Belli**, Director of the Center for Technology and Society at FGV Law School Rio, member of the Brazilian Presidency's National Cybersecurity Committee
- **Anjoum Noorani**, General Consul in Brazil, Government of UK
- **Pedro Peres Cavalcante**, Researcher at the Laboratory of Public Policy and Internet (online)

15:30 - 16:00

Networking Coffee Break

16:00 - 17:15

Session 2: Sandboxes for agile regulation and policy making

In this roundtable speakers across government and the private sector will share their experience with sandboxes and the lessons from their implementation. Representatives from academia will also be invited to share recent research on sandboxes and the types of skills regulators need to embark on such efforts. Panelists will cover different topics and geographies where sandboxes have been designed and implemented such as for AI, data, finance and other sectors.

Moderator: Lorrayne Porciúncula, Executive Director, Datasphere Initiative

Speakers:

- **Fabiana Cebrian,** General Coordinator of Technology and Research, National Data Protection Authority of Brazil
- **Armando Guio Español,** Executive Director, Global Network of Internet & Society Centers, Harvard University
- **Armando Manzuetta,** Digital Transformation Director, Ministry of the Economy of the Dominican Republic
- **Amor MacLang,** Founding Member, International Digital Economies Association, and Convenor, Digital Philipinas
- **Rodrigo Assumpção,** President, Dataprev
- **Syed Iftikhar,** Director of Policy Innovation, DCO (online)

17:15 - 18:15	**Session 3: Sandboxes in municipalities** The City of Rio de Janeiro will host a session discussing how municipalities could leverage sandboxes to address local data challenges. Topics such as sustainable transportation, education and environmental factors will be discussed as well as concrete lessons learned and opportunities for cross-border exchange. **Moderator: Maria Marinho,** Professor in Innovation policy, Instituto Liberdade Digital **Speakers:** • **Marcelo Almeida,** Director, Associação Brasileira Empresas de Software • **Elisabeth Sylvan,** Affiliate, Berkman Klein Center for Internet & Society at Harvard University • **Rafael Wanderley,** Director of the Innovation Lab, SMDUE Rio de Janeiro • **Rafael Fassio,** State Prosecutor and Public Innovation expert, USP (online) • **Michael Hennessey,** Operational Specialist, Interamerican Development Bank (online) • **Guilherme Domingues,** Co-founder, BrasilLab (online)
18:30 - 20:00	**Presentation of Sandbox.Rio and Networking Reception** Presentations of innovative projects of start-ups participating in the second cycle of Sandbox.Rio.
22 JULY 2024 - MONDAY	
9:30 - 11:30	**Session 4: Building Cross-Border Sandboxes Workshop** (in-person only) This session will aim to put practice into action by inviting participants to discuss their specific interests on where sandboxes could be implemented. Breakout groups will be organized around specific topics building on policy briefs that provide background evidence and recommendations. • **Artificial Intelligence**	Lead discussants: **Laura Galindo-Romero**, AI Policy and Governance Program Manager, Open Loop and **Thiago Moraes**, National Data Protection Authority of Brazil • **Sustainability**	Lead discussant: **Fabro Steibel**, Executive Director, ITS and **Henrique Dolabella**, Head of Department of Rural Environmental Registry Department, MGI
11:30 - 12:00	**Session 5: Developing Cross-border Sandboxes** Participants will reconvene in an interactive roundtable to share feedback from the breakout groups and offer examples of potential activities or policy areas that could be initiated within the Global Sandboxes Forum moving forward.
12:00 - 12:45	**Session 6: The Path Forward** The Datasphere Initiative will present DI next steps, activities and timeline for the Global Sandboxes Forum including future events, outputs and work streams where participants can actively engage. Partners will also be invited to announce connected initiatives and how participants can contribute to relevant work in 2024/2025. **Moderator: Bertrand de la Chapelle**, Chief Vision Officer, Datasphere Initiative **Speakers:** • **Lorrayne Porciúncula**, Executive Director, Datasphere Initiative • **Bruno Portela,** Federal Attorney's, Advocacia-Geral da União • **Shivkumar Govind,** Director of Responsible Technology, Omidyar Network (online) • **Chris Maloney,** Program Officer in the Gender Equity and Governance Program, William and Flora Hewlett Foundation (online)
12:45 - 13:00	**Closing Session**
13:00 - 14:00	**Closed Lunch for Institutional Partners and Funders**
14:00 - 16:30	**Closed Roundtable Session**
16:30 - 17:00	**Closed Networking Coffee Break**

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