



# Digital Public Infrastructures in Brazil: Foundations for an Inclusive Digital Future



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# EXECUTIVE SUMMARY

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This report<sup>1</sup> explores the concept, taxonomy and application of Digital Public Infrastructures (DPIs) in Brazil, offering key insights into their role in driving digital transformation and promoting inclusive access to public services.

## KEY FINDINGS

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### 1. THE CONCEPT OF DPI:

DPIs are the technological and organizational foundations that support the delivery of digital services in the public interest. In Brazil, they are crucial for digital transformation and to promote accessibility through systems like Gov.br and PIX.

### 2. DPI TAXONOMY

This report proposes to categorize DPIs as foundational (e.g., Gov.br, PIX) or sectoral (e.g., Meu SUS Digital, Cadastro Ambiental Rural). Foundational DPIs serve multiple sectors, while sectoral DPIs target specific areas like health and the environment.

### 3. REVIEW OF BRAZILIAN DPIs

This report reviews DPIs that have been successfully implemented in Brazil, namely:

- **PIX:** An instant payment system promoting financial inclusion
- **GOV.BR:** A unified platform for digital government services
- **MEU SUS DIGITAL:** Gives easy access to health information
- **CADASTRO AMBIENTAL RURAL (CAR):** Supports environmental conservation and sustainable land use

### 4. KEY CHALLENGES AND OPPORTUNITIES

- Enhancing interoperability between different DPI systems
- Strengthening data security and privacy measures
- Expanding access to digital services across all population segments
- Leveraging DPIs to accelerate progress towards UN Sustainable Development Goals

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<sup>1</sup> This report is based on discussions held during the event "Digital Public Infrastructure: Driving Responsible Digital Transformation" organized by CEBRI with the support of AWS on July 24, 2024. The event brought together experts to discuss the crucial role of Digital Public Infrastructures (DPIs) in Brazil's social, economic and environmental development. The major topics addressed involve interoperability, digital inclusion, sustainability and the importance of robust governance for these infrastructures.

## 5. FUTURE DIRECTIONS

This report emphasizes the need for continued cooperation between the public and private sectors, and civil society to further develop and improve DPLs in Brazil.

This review underscores the fundamental role DPLs have in fostering a more inclusive and sustainable society in Brazil, in expanding access to digital services, in protecting data, and in developing solutions tailored to various sectors of Brazilian society.

# 1. THE CONCEPT OF DPI

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Generally speaking, any infrastructure is a set of elements, physical facilities, systems and essential services that promote the social and economic development of a given country or area. The physical infrastructure that promotes social and economic development includes, for example, power, telecommunications and water distribution networks, and other, more readily visible elements, such as roads. With the advancement of technology and digital transformation, part of this service provision infrastructure today is also present into the digital domain.

“Digital infrastructure” refers precisely to the technological and organizational foundation that enables the transfer, processing, and storage of information, as well as the use of digital applications and services. The term “digital infrastructure” still is often used to designate the physical telecommunications system (underwater cables, fiber optic networks, etc.) that makes up the network on which the Internet operates. The Internet, after all, is one of the greatest examples of how the combination of software (protocols) and hardware (cables, terminals and servers) can create a digital infrastructure that positively contributes to social and economic development.<sup>2</sup>

The growing digitalization of public services has turned “digital public infrastructure” into a household term and has added a complementary perspective to what was mentioned above by introducing a “public”<sup>3</sup> aspect to the concept. In the mind of many, the idea of “digital infrastructure” is now associated with the provision of public services by the State. However, this is not always the case. The idea of “public” digital infrastructure is also related to the concept of “public interest”<sup>4</sup> in connection with the benefit that a given system will provide to society at large. In other words, it is not just a public service provided by the State in a narrow sense. For example, of the 166 governments that launched cash-transfer programs during the COVID-19 pandemic, those involving a DPI reached in average 51 percent of their populations, while those without any DPI reached only 16 percent.<sup>5</sup>

Although there is no single definition for the term in the literature, Digital Public Infrastructures (DPI) are in general understood as the digital bases or foundations on which services and applications that advance the public interest can be developed and delivered across a variety of sectors.

We can then describe DPIs as the foundational digital capabilities a nation provides to facilitate efficient and secure digital interactions within society. DPIs consist of the software, content, data, models, standards and specifications that collectively

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<sup>2</sup> Eaves, D.; Vasconcellos, B.; Mazzucato M. Digital public infrastructure and public value: What is ‘public’ about DPI? UCL Institute for Innovation and Public Purpose Working Paper Series: IIPP WP 2024-05. Retrieved from: <https://www.ucl.ac.uk/bartlett/public-purpose/publications/2024/mar/digital-public-infrastructure-and-public-value-what-public-about-dpi>

<sup>3</sup> Ibid.

<sup>4</sup> Ibid.

<sup>5</sup> World Bank. The COVID-19 crisis showed the future of G2P payments should be digital. Here’s why. Retrieved from: <https://blogs.worldbank.org/en/voices/covid-19-crisis-showed-future-g2p-payments-should-be-digital-heres-why>



form the foundation on which digital services can be built more rapidly and efficiently. Generally speaking, the provision of DPIs reduces the repetitive development, implementation and operation of common capabilities while increasing digital inclusion and creating opportunities for innovation across all sectors. A recent Harvard Business Review article<sup>6</sup> noted that digital identity programs by themselves “can unlock economic value equivalent to 3-13% of GDP, with an average 6% improvement for emerging countries.”



## 1.1 DPIs AND THE G20

The term gained traction during India's G20 presidency in 2023, when it began being used in reference to specific topics discussed during the meeting of global leaders.<sup>7</sup>

During the G20 in India, the Report of the Task Force on Digital Public Infrastructure marked the beginning of an effort that continues to this day and that was present in G20 discussions in Brazil in 2024. For the first time, a minimum consensus was reached to describe DPIs as a “set of shared digital systems that should be secure and interoperable, that can be built on open standards and promote access to services for all, with governance and community as core components of DPI” and to agree that DPIs should be at the center of discussions about our digital future.<sup>8</sup>

## 1.2 DPI AND THE UN: DPIs AS SDG ACCELERATORS

In addition to the G20, the UN has also addressed the issue and considers that DPIs open opportunities for development, especially in low- and middle-income countries. According to the United Nations Development Programme (UNDP), “DPI is an evolving concept, but there is a growing consensus that it is a combination of (i) open, networked technology standards

<sup>6</sup> Harvard Business Review. The Case for Investing in Digital Public Infrastructure. Retrieved from: <https://hbr.org/2023/05/the-case-for-investing-in-digital-public-infrastructure>

<sup>7</sup> Vide também: Global DPI Repository (GDR), an initiative of the Indian G20 presidency in 2023. Disponível em: <https://www.dpi.global/>

<sup>8</sup> UNDP G20 Digital Ministers Recognize Digital Public Infrastructure as an Accelerator of the Global Goals. Disponível em: <https://www.undp.org/press-releases/g20-digital-ministers-recognize-digital-public-infrastructure-accelerator-global-goals>

created in the public interest, (ii) enabling governance, and (iii) a community of innovative and competitive market actors working to drive innovation, especially in public programs.”<sup>9</sup>

Investment in DPIs can therefore operate as an important catalyst to achieve the UN Sustainable Development Goals and their potential is not limited to just a few goals. The UNDP developed a compendium that lists more than 50 examples of the use of DPIs or similar systems, ranging from digital identity systems associated with the provision of basic services to more complex infrastructures employed to manage carbon credits, to name but two.

## 1.3 BRAZILIAN DEFINITION OF DPIs

The Decree that created Brazil’s Digital Government Strategy<sup>10</sup> describes DPIs (or IPDs, from the Portuguese “Infraestruturas Públicas Digitais”) as “multipurpose structural solutions that use network technology standards in the public interest, that follow the principles of universality and interoperability, that are open for use by public and private<sup>11</sup> sector entities and that can integrate services in physical and digital channels.” This description ties in with our comment above about the scope of the term going beyond public services provided by the State.

Brazil has stepped up incentives for the use of DPI-based solutions, such as the gov.br platform and PIX, the latter developed and implemented by the Central Bank. According to the Federal Government, “Brazil sees the potential of Digital Public Infrastructures (IPDs), especially in digital identity and data sharing solutions, as powerful tools to make public services more inclusive and user-centered<sup>12</sup>.” In addition to best-known examples, we shall also describe a significant Digital Public Infrastructure in development: the Rural Environmental Registry (CAR) and its associated system (SICAR).

<sup>9</sup> Information taken from the landing page on DPIs on the UNDP website. Retrieved from: <https://www.undp.org/digital/digital-public-infrastructure>

<sup>10</sup> Decree No. 12.069/ 2024. Retrieved from: [https://www.planalto.gov.br/ccivil\\_03/\\_ato2023-2026/2024/decreto/d12069.htm](https://www.planalto.gov.br/ccivil_03/_ato2023-2026/2024/decreto/d12069.htm)

<sup>11</sup> The private sector also directly benefits from a country’s DPI. Businesses can easily confirm their customers’ identities without onerous and expensive verification processes. Real-time payments can be incorporated into physical and online commerce outlets with minimal investment. Employers can easily verify candidate certifications and qualifications.

<sup>12</sup> Brazilian Government. Gestão apresenta iniciativas de governo digital a representantes de 15 países. Retrieved from: <https://www.gov.br/secom/pt-br/assuntos/noticias/2024/08/gestao-apresenta-iniciativas-de-governo-digital-a-representantes-de-15-paises>



## 2. TYPES OF DPIS EXISTING IN BRAZIL

So as to better understand Brazilian DPIs, we propose to categorize them as (i) foundational or (ii) sectoral. Foundational DPIs are digital public infrastructures that serve different purposes in different sectors, thus creating the foundation for different public interest services. For example, digital identity systems that provide verifiable credentials and authentication in a digital ecosystem, general-purpose payment systems, and data sharing systems that enable a secure flow of data, contributing to interoperability.

Sectoral DPIs are digital public infrastructures implemented in specific sectors. In other words and in contrast to general-purpose DPIs, these DPIs offer specific solutions to the challenges faced in sectors such as health, education, environmental management and protection. Although sectoral DPIs involve solutions and services focusing on specific sectors, they continue to show important characteristics such as interoperability and information sharing. Sectoral DPIs are typically based on foundational DPIs to offer specialized services in a pre-determined segment of society.

The gov.br platform and PIX are significant Brazilian foundational DPIs, that is, multipurpose digital public infrastructures that promote social and economic development across several sectors. Brazil also boasts robust sectoral DPIs, such as Meu SUS Digital and Cadastro Ambiental Rural (CAR). These DPIs will be described below, offering an initial taxonomy of Brazilian DPIs, but CAR will be addressed in a specific topic given its current potential.

### 2.1. GOV.BR

Implemented in practice since its official launch in 2019<sup>13</sup>, the *gov.br* project seeks to unify the Federal Government's digital channels and to integrate the Federal Government's websites in order to give citizens easy and integrated access to various services. Use of gov.br solutions has been growing in the transition to integrated service delivery systems.

The GOV.BR portal allows centralized access to almost 5,000 digital public services, such as INSS, Digital Work Booklet, Federal Revenue Service and eSocial, 90% of which are fully digital.<sup>14</sup> The gov.br platform includes not only the web portal but also a smartphone application that runs in integration with other mobile device systems. This facilitates its dissemination among the Brazilian population, making this DPI more democratic and participatory.

<sup>13</sup> Decree No. 12.069/2024. Retrieved from: [https://www.planalto.gov.br/ccivil\\_03/\\_ato2023-2026/2024/decreto/d12069.htm](https://www.planalto.gov.br/ccivil_03/_ato2023-2026/2024/decreto/d12069.htm)

<sup>14</sup> Brazilian Government. Saúde Digital. Retrieved from: <https://www.gov.br/governodigital/pt-br/estrategias-e-governanca-digital/transformacao-digital/central-de-qualidade/painel-de-monitoramento-de-servicos-federais>

The gov.br system integration effort includes a digital identity initiative – a subject that has been in the Federal Government’s sight for some time<sup>15</sup>. The new National Identity Card (CIN) upgrades the National Citizen Identification System, previously referred to as the “general registry”, by establishing a national identity standard that allows the integration of citizen identification and other online or offline services.

A key point that sets the gov.br platform apart as a foundational DPI is its interoperability. Based on the Interoperability Standards architecture (ePING), the platform includes a “minimum set of premises, policies and technical specifications that govern the use of Information and Communication Technology in the Federal Executive Branch, establishing conditions for its interaction with other government branches and spheres and with society at large”.<sup>16</sup> This increases the possibilities of implementing this DPI nationwide.

The interoperability and size of the relevant systems and services, and the volume of data they carry, make it important to implement data security and protection mechanisms in all integrated systems. In 2023, for example, the Information Privacy and Security Program (PPSI) was created to establish “a set of projects and processes for adaptation in the areas of privacy and information security and [whose] values [are]: maturity; resilience; effectiveness; cooperation and intelligence.”<sup>17</sup>

In April 2024, the Federal Government created the Center for Excellence in Privacy and Information Security (CEPS GOV.BR)<sup>18</sup> as a PPSI initiative to foster a culture of privacy and information security and to engage the 250 agencies and entities that participate in the Information Technology Resource Management System (SISP). Interoperability and data protection are two key pillars of a foundational DPI of the stature of gov.br.

## 2.2. PIX

Another well-known example from Brazil is the PIX payment system, launched by the Central Bank in 2020. PIX made financial transactions easier by allowing users to perform instant payments and transfers through personal keys that have been pre-registered with banks. PIX was widely adopted by Brazilians as an alternative to traditional payment methods controlled by the private financial system, such as DOC/TED cash transfers, and payment slips and forms.

PIX transactions grew by 75% in 2023 compared with the previous year<sup>19</sup>, making PIX the most widely used payment method in Brazil and leading to a record-breaking 224 million transactions performed in a single day.<sup>20</sup> The system continues to evolve: a recurring payment feature (PIX Automático<sup>21</sup>) is expected to be launched in June 2025 and a PIX contactless functionality using digital wallets in the user’s mobile device is also in development.<sup>22</sup>

<sup>15</sup> Decree No. 11.797/2023. Retrieved from: [https://www.planalto.gov.br/ccivil\\_03/\\_ato2023-2026/2023/decreto/D11797.htm](https://www.planalto.gov.br/ccivil_03/_ato2023-2026/2023/decreto/D11797.htm)

<sup>16</sup> Brazilian Government. *Interoperabilidade*. Retrieved from: <https://www.gov.br/governodigital/pt-br/governanca-de-dados/interoperabilidade>

<sup>17</sup> Brazilian Government. *Programa de Privacidade e Segurança da Informação (PPSI)*. Retrieved from: <https://www.gov.br/governodigital/pt-br/privacidade-e-seguranca/ppsi-atual>

<sup>18</sup> Brazilian Government. *Gestão lança Centro de Excelência em Privacidade e Segurança da Informação (CEPS GOV.BR)*. Retrieved from: <https://www.gov.br/governodigital/pt-br/noticias/gestao-lanca-centro-de-excelencia-em-privacidade-e-seguranca-da-informacao-ceps-gov-br>

<sup>19</sup> Agência Brasil. *Pix foi o meio de pagamento mais popular do Brasil em 2023*. Retrieved from: <https://agenciabrasil.ebc.com.br/economia/noticia/2024-03/pix-foi-o-meio-de-pagamento-mais-popular-do-brasil-em-2023>

<sup>20</sup> Agência Brasil. *Pix bate recorde e supera 224 milhões de transações em um dia*. Retrieved from: <https://agenciabrasil.ebc.com.br/economia/noticia/2024-07/pix-bate-recorde-e-supera-224-milhoes-de-transacoes-em-um-dia>

<sup>21</sup> Agência Brasil. *BC define que Pix Automático será lançado em junho de 2025*. Retrieved from: <https://agenciabrasil.ebc.com.br/economia/noticia/2024-07/bc-define-que-pix-automatico-sera-lancado-em-junho-de-2025>

<sup>22</sup> Agência Brasil. *Pix por aproximação deve começar em fevereiro de 2025*. Retrieved from: <https://agenciabrasil.ebc.com.br/economia/noticia/2024-07/pix-por-aproximacao-deve-comecar-em-fevereiro-de-2025>

PIX must be categorized as a foundational DPI because it is a digital public infrastructure that promotes interoperability across multiple payment providers within the financial system, thereby reducing transaction costs and fostering financial inclusion for the population at large.

Another foundational DPI under development by the Central Bank is DREX, the digital version of Brazil's currency, the "real". The platform will use distributed ledger technology (DLT) to enable financial transactions supported by secure contracts. DREX will use digital identity verification or service authentication to enhance data interoperability and to protect the privacy of the information transmitted over the network.

## 2.3. MEU SUS DIGITAL

Meu SUS Digital is an evolution of the earlier Conecte SUS platform. It is a sectoral (health) DPI with over 30 features offered in web and mobile versions. Meu SUS Digital was developed to consolidate citizens' health information and to operate as "a channel for SUS users to access their health history and as a multifunctional personal health management space."<sup>24</sup>

Users can use Meu SUS Digital to access their health history and vaccination records and to obtain health certificates and documents. In some municipalities where the Citizen's Electronic Health Record (PEC) is already in use, users can also schedule medical appointments through the system. Meu SUS Digital is supported by foundational DPIs such as gov.br, and gives the Brazilian population ready access to some of the health services the State offers in the digital arena.<sup>25</sup>

<sup>23</sup> Agência GÓV. App SUS Digital amplia funcionalidades e prepara prontuário médico eletrônico. Retrieved from: <https://agenciagov.ebc.com.br/noticias/202407/sus-digital-estrategia-do-ministerio-da-saude-amplia-acesso-da-populacao-as-informacoes-de-saude-e-inicia-a-implantacao-de-prontuario-unificado>

<sup>24</sup> Meu SUS Digital. Dúvidas frequentes. Retrieved from: <https://meusdigital.saude.gov.br/perfil/duvidas-frequentes>

<sup>25</sup> Ibid.

## 3. THE EXPERIENCE OF THE RURAL ENVIRONMENTAL REGISTRY



### 3.1 HOW CAR AND SICAR WORK

The Rural Environmental Registry (*Cadastro Ambiental Rural - CAR*) is a "national electronic public registry, of mandatory use for all rural properties, whose purpose is to consolidate environmental information on formally- or informally-owned rural properties. It is the main national database for control, monitoring, environmental and economic planning purposes and to combat deforestation."<sup>26</sup>

Registration with CAR is effected using an electronic system through the competent agency of the state where each property is located. At the federal level, the Brazilian Forest Service (SFB) is responsible for coordinating CAR implementation and for providing technical support through technological solutions.

SICAR is the National Rural Environmental Registry System (*Sistema Nacional de Cadastro Ambiental Rural*), a nationwide electronic system to manage environmental information on rural properties throughout the country. Although actual registration is effected through the competent state agency, SICAR gathers information on all rural properties nationwide and issues each property's registration certificate. This data is used to "support control, monitoring, environmental and economic planning policies, programs, projects and activities, and to combat deforestation."<sup>27</sup>

<sup>26</sup> Brazilian Government. O que é o CAR?. Retrieved from: <https://www.car.gov.br/#/sobre>

<sup>27</sup> Regulatory Instruction No. 3/2014. Retrieved from: [https://www.car.gov.br/leis/IN\\_CAR\\_3.pdf](https://www.car.gov.br/leis/IN_CAR_3.pdf)

Some states operate their own electronic systems, while others use applications developed by the Federal Government. In the latter case, the applications are embedded in the relevant state's digital infrastructure and their databases are later integrated into SICAR. A third group of Brazilian states uses SICAR applications and the information technology infrastructure provided by the Brazilian Forest Service and by the Ministry of the Environment.

The Environmental Regularization Program (*Programa de Regularização Ambiental* - PRA) involves actions and initiatives that formal or informal rural property owners must implement so that their properties will comply with statutory or other environmental requirements. In similarity with CAR, adherence to PRA must be effected through the state environmental protection agencies.

## 3.2 CAR AS A DPI

CAR has great potential as a sectoral DPI based on the gov.br digital infrastructure. CAR and SICAR made it possible to gather information on more than 7 million rural properties, including changes in land use, environmental liabilities and conservation areas.<sup>28</sup> The associated database can be used for various purposes and is key to promote environmental preservation in Brazil. According to the Ministry of Management and Innovation in Public Services, the relevant data can be used to support the sustainable use of privately-owned land in compliance with the Brazilian Forest Code.<sup>29</sup>

As ITS Rio explains, however, “one of the challenges CAR faces is that it was originally developed as a single-direction database and registration system. It serves as a registry for rural properties, but it was not designed as a platform based on which society, academia, the private sector and other stakeholders can co-create solutions”.<sup>30</sup> CAR and SICAR need to be improved to yield the benefits associated with large-scale DPIs. Those improvements include:

- (i) Data integration and interoperability:** Enhance CAR's integration with other government databases to allow greater data reuse and to better validate the data entered upon registration.
- (ii) Population coverage and adherence:** Increase CAR adherence and coverage in order to include a larger portion of Brazil's formal and informal rural properties.
- (iii) Verification and validation mechanisms:** Strengthen the verification and validation processes of the information environmental agencies feed into CAR so as to shrink the validation deficit and to include non-government permit holders.
- (iv) Provision of data and information:** Provide ready access to and interaction with CAR data and information to stakeholders such as government agencies, researchers and society at large.<sup>31</sup>

<sup>28</sup> Brazilian Government. *Ministra da Gestão destaca avanços do Brasil em infraestrutura pública digital durante evento na ONU*. Retrieved from: <https://www.gov.br/gestao/pt-br/assuntos/noticias/2023/setembro/ministra-da-gestao-destaca-avancos-do-brasil-em-infraestrutura-publica-digital-durante-evento-na-onu>

<sup>29</sup> Ibid.

<sup>30</sup> ITS Rio. *Infraestruturas Digitais Públicas*. Retrieved from: [https://itsrio.org/wp-content/uploads/2016/12/20240411\\_Relatorio\\_InfraestruturasDigitaisPublicas\\_1.pdf](https://itsrio.org/wp-content/uploads/2016/12/20240411_Relatorio_InfraestruturasDigitaisPublicas_1.pdf)

<sup>31</sup> Ibid.

## 4. CONCLUSIONS AND LESSONS LEARNED FROM THE WORKSHOP

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Digital Public Infrastructures (DPIs) have emerged as central pillars of Brazil's digital transformation, enabling the modernization of public services and boosting inclusive access to said services and to the financial system. Foundational DPIs like Gov.br and PIX have put Brazil at the forefront of the use of digital infrastructures across multiple sectors. DPIs can be described as the foundational digital capabilities a nation provides to facilitate efficient and secure digital interactions within society.

### KEY INSIGHTS AND LESSONS LEARNED

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#### 1. SECTORAL ADAPTATION

Initiatives such as Meu SUS Digital and Cadastro Ambiental Rural (CAR) show that increased DPI use can improve performance in areas such as health data management and environmental conservation.

#### 2. INTEROPERABILITY IS CRUCIAL

The workshop showed that data interoperability across different layers is crucial, including data, microservices, and services. This is particularly clear in healthcare, where poor interoperability hinders the use of electronic medical records. Creating interoperability standards is key to boost DPI use, especially in sectors such as healthcare.

#### 3. ENVIRONMENTAL INTEGRATION

CAR's potential as a Forest Code compliance tool shows how DPIs can be leveraged to address critical challenges such as deforestation and environmental conservation.

#### 4. MULTI-STAKEHOLDER COOPERATION

The workshop showed that DPIs will not gain ground if the public and private sectors, and civil society at large do not cooperate.

#### 5. BALANCING INNOVATION AND SECURITY:

Innovation in DPI implementation must be associated with robust data security and privacy.

#### 6. INCLUSIVE DESIGN

Digital inclusion must be at the core of DPI policies in order to expand access to digital services to all population segments.



## 7. CONTINUOUS EVOLUTION

The ongoing development of systems such as DREX and PIX Automático shows that DPIs must continually evolve to meet changing societal needs and technological advancements.

## 8. SCALABILITY AND FLEXIBILITY

The ability to implement solutions nationally while allowing for regional adaptations (as seen with SICAR) is key for large-scale DPIs to succeed.

## 9. FOCUS ON SUSTAINABILITY

Sustainability must be a core consideration in developing and implementing DPIs, as exemplified by CAR's role in monitoring environmental compliance.

## 10. GLOBAL LEADERSHIP POTENTIAL

Brazil's DPI successes position the country as a potential leader in digital governance and offer valuable insights to other nations.

In conclusion, Brazil has made significant progress in implementing DPIs, showing their potential to drive inclusive growth and to enhance the delivery of public services. But challenges remain, particularly in improving system interoperability and in expanding access to digital services. The path forward requires continued investment and cooperation and a commitment to inclusive and sustainable digital development. By addressing these challenges and building on its successes, Brazil can further strengthen its digital infrastructure, so that the benefits of technological progress can reach all segments of society and so that Brazil can position itself as a global leader in digital public innovation.

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