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Micro-Dimensions of Digital Policy Design Instruments: A Comparative Analysis Across Brazilian States

LIZANDRO LUI [*], THAYNÁ GOMES ROSA [**], RAFAEL BARBOSA DE AGUIAR [**], & LUCIANA LEITE LIMA [†]
*School of Public Policy, Government, and Business, Getulio Vargas Foundation (FGV EPPG), Brasília, Brazil, **Public Policy Management, University of São Paulo, São Paulo, Brazil, †Public Policy, Federal University of Rio Grande Do Sul (UFRGS), Porto Alegre, Brazil

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ABSTRACT *This study examines the micro-dimensions of policy design in the digital transformation agenda across Brazilian states, focusing on the selection and combination of policy instruments. The empirical corpus comprises regulatory documents published between 2019 and 2025. The analysis reveals substantial variation across states; some prioritize substantive instruments linked to authority and organization, such as plans and digital platforms, while others emphasize procedural instruments. These configurations yield distinct implementation styles. Substantive arrangements tend to generate more technical, operationally driven policies, whereas procedural arrangements foster legitimacy, coordination, and adaptability. The study argues that balanced combinations of instruments are decisive for policy effectiveness.*

Keywords: policy design; digital transformation; policy instruments; comparative analysis

Introduction

Research on policy design has advanced significantly over the past decades, aiming to generate knowledge about the concrete aspects of public policies, such as objectives, instruments, inclusion and exclusion rules, and target populations (Howlett 2018). Over time, scholarship has focused more on specific dimensions of policy design to the

Lizandro Lui is a professor at the School of Public Policy, Government, and Business, Getulio Vargas Foundation (FGV EPPGE), Brasilia, Brazil.
Thayná Gomes Rosa, University of São Paulo (USP), Graduate Program in Public Policy Management, São Paulo, Brazil.
Rafael Barbosa de Aguiar, University of São Paulo (USP), Graduate Program in Public Policy Management, São Paulo, Brazil.
Luciana Leite Lima, Federal University of Rio Grande do Sul (UFRGS), Graduate Program in Public Policy, Porto Alegre, Brazil.
Correspondence Address: Lizandro Lui, School of Public Policy, Government, and Business, Getulio Vargas Foundation (FGV EPPG), Brasilia, DF SGAN 602, Brazil. Email: lizandrolui@gmail.com

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detriment of others. Bali et al. (2024) note that the field has primarily focused on the macro- and meso-level aspects of public policy. Macro-level studies typically examine broad governance structures, dominant ideas, and institutional arrangements, and how these collectively shape governments' instrument choices to achieve their objectives. Meso-level studies, in turn, focus on different types of policy instruments, their organization into "mixes" or combinations, and how these affect the logical structure of policy design (Newman and Nurfaiza 2022).

Despite significant progress in macro- and meso-level policy analysis, the recent literature highlights a persistent gap in the study of the micro-dimensions of policy design (Bali et al. 2024), namely how governments calibrate policy instruments within their designs and how this calibration shapes the implementation process. Understanding these micro-dimensions may provide valuable insights for practitioners seeking frameworks to analyze, design, and implement public policies (Bali et al. 2024; Capano and Howlett 2024; Migone and Howlett 2024). Accordingly, this study aims to examine the micro-dimensions of policy design, specifically focusing on policy instruments. We adopt Hood's (1983) typology, classifying instruments into nodality, authority, treasure, and organization, and combine it with Howlett's (2018) distinction between substantive and procedural instruments. Our empirical focus is the digital transformation policy implemented across Brazil's 27 subnational governments. This analysis enables us to understand how state governments select instruments for digital transformation initiatives and how these choices shape their implementation style.

Brazil's federal-level digital transformation agenda has been the subject of several studies in recent years (Filgueiras et al. 2019). However, relatively little attention has been given to digital transformation processes at the subnational level. Brazil is a federal country comprising 26 states, one federal district (which functions as both a state and a municipality), and 5,570 municipalities. Since 2016, with the launch of the Digital Government Strategy, Brazil has invested in advancing public sector digital transformation (Filgueiras et al. 2019). In 2019, the federal government consolidated its technical and political efforts into a single access (platform Gov.br) that integrates a broad set of public services.

In 2024, the federal government enacted Decree No. 12,069 (June 21, 2024), which established the National Digital Government Strategy and the National Digital Government Network (Rede Gov.br), setting out a new federal strategy for the 2024–2027 period (Brasil 2024). Although subnational governments had previously engaged in digital transformation initiatives, this new institutional arrangement prompted a greater formalization of state-level digital transformation policies. In this context, it becomes increasingly relevant to understand how state governments configure their policy designs to address the challenges posed by digitalization in public administration and service delivery.

The following questions guide this research: (i) How are state-level digital transformation policies designed in Brazil? (ii) What is the composition and nature of the instrument combinations used in these policy designs? (iii) Considering the interactions between instruments, how do these dynamics shape the policy's implementation style?

This study contributes to the emerging body of research seeking to deepen the understanding of the micro-dimensions of policy design (Bali et al. 2024; Lui et al. 2025), particularly regarding the nature and characteristics of instrument combinations aimed at transforming public service delivery. Also, this research contributes to the advancement of policy design studies by focusing on a field that remains relatively unknown (Capano and

Howlett 2024). We posit that the dimensions embedded in policy designs orient implementation processes. Consequently, our analysis sheds light on a relatively underexplored aspect of public policy, equipping policy analysts with a refined lens for understanding design choices and enabling policymakers to better shape implementation processes. The analytical framework proposed in this study seeks to advance knowledge in policy design and offer valuable insights into the implementation styles adopted by digital transformation policies.

Theoretical Background

The Digital Transformation in Brazil

The global debate on digital transformation has popularized the concept of government as a platform (Mergel et al. 2019). This approach requires processing a wide range of citizen data to deliver services effectively (Filgueiras et al. 2019). The government-as-a-platform model emphasizes data protection, standardized data collection and storage processes, interoperability, and information sharing among public agencies as prerequisites for effective policy delivery. The persistence of data silos (i.e., datasets maintained by specific departments or agencies without adequate sharing or well-defined security protocols) constitutes a significant barrier to digital transformation. As Wilson and Mergel (2022) argue, such silos reflect a lack of political and institutional coordination, undermining governments' ability to deliver digitally enabled public services in an efficient and integrated manner. Digital government is not limited to implementing technological tools within the state structure, but also involves organizational, cultural, and relational changes that increase the integration of technologies into government action, with a view to offering services to citizens through a single government platform.

Digital transformation requires robust political coordination across multiple organizations to ensure that service delivery is coherent and aligned with each entity's priorities and objectives (Filgueiras et al. 2019). This involves effective negotiation and agreement-making between agencies that often operate autonomously, thereby underscoring the centrality of interorganizational collaboration for the success of digital transformation in the public sector. Moreover, Filgueiras et al. (2025) highlight that state-level data-protection frameworks in Brazil exhibit significant heterogeneity: each federal unit has developed its own set of norms that are neither standardized nor fully aligned with the national data protection law enacted in 2018. This regulatory fragmentation leads to uneven enforcement of citizen rights. Given that data governance is a prerequisite for digital transformation, Filgueiras et al. (2025) hypothesize that significant differences may also exist in how Brazilian state governments have designed their digital transformation policies.

According to Bonduki and Cunha (2023), the federal government's approach to forming the Rede Gov.br (Gov.br Network) has resulted in unequal progress. The states and municipalities with greater administrative capacity that chose to follow federal leadership successfully integrated with Gov.br, as seen in Rio Grande do Sul. Others, like São Paulo, leveraged their technical capacity to pursue independent solutions. In contrast, states with limited resources faced significant obstacles, including the lack of technical and financial support, which meant that merely indicative coordination mechanisms were insufficient, exacerbating federative inequality in implementing digital transformation. These findings suggest that each Brazilian state has adopted a specific configuration or "package" of policy instruments for its digital transformation agenda.

Decree No. 12,069/2024 establishes the National Digital Government Strategy, requiring state governments to issue their own digital government strategies and action plans that integrate physical and digital service delivery channels. Analyzing these state-level strategies enables the identification and interpretation of the instruments each government selects to implement its digital transformation policy. Consequently, each state must design a tailored mix of instruments to ensure effective policy implementation.

Due to digital transformation requiring the creation of an internal organizational structure capable of reorganizing service delivery, developing robust and interoperable databases, and implementing a single sign-on system, while simultaneously ensuring direct citizen-facing services through a government platform with accessible language and secure, user-friendly navigation, it is argued that the instruments adopted must address both internal state capacities and direct interaction with citizens. Moreover, given the complexity of the policy, its success depends on a carefully calibrated combination of instruments that integrates regulation, citizen communication, service provision, and incentives for citizen, business, and municipal government participation.

Analyzing the Micro-Dimensions of Policy Design: Proposal for an Analytical Model

Policy design consists of the arrangements between objectives and instruments that constitute the operational dimension of a public policy (Howlett 2018). Objectives serve to operationalize political ideologies, indicate expected outcomes, provide strategic guidance for action, and confer meaning to processes (Petek et al. 2021). Instruments, in turn, represent the most concrete manifestation of governmental intent and are the implementation techniques devised to achieve these objectives (Capano and Howlett 2020).

Although several typologies have been proposed to classify policy instruments, the most influential and widely used framework remains Hood's (1983), which organizes instruments into four categories: nodality, authority, treasure, and organization (Acciai and Capano 2021). According to Capano and Howlett (2020), the literature on policy instruments has advanced along several analytical fronts, exploring: basic classifications, distinguishing between procedural and substantive instruments, or between those directed and not directed toward implementation; the factors explaining why and how policymakers choose specific instruments over others and revise past choices; shifts in governance modes over time and their effects on instrument selection; the emergence of "instrument constituencies", i.e., groups of actors who advocate for specific tools regardless of the problem to be addressed; the political and policy effects produced by the adoption of specific instruments, including their implications for which actors are advantaged or disadvantaged; and the conceptualization of instruments as institutions that embody social and political values, shaping identities, worldviews, and ultimately patterns of support or conflict surrounding their selection.

Theories of instrument choice have evolved through several generations, progressing from isolated analyses to comparative studies and comprehensive theoretical frameworks (Howlett 2018). Early debates were shaped by simplistic dichotomies such as "carrots versus sticks" (Vedung 1998), but have since advanced toward a more sophisticated understanding of the broad spectrum of instruments available to policymakers. Furthermore, research on policy implementation in Brazil has traditionally emphasized the interaction between bureaucracy and citizens to explain phenomena related to policy execution.

More recent literature on policy design has sought to understand how micro-dimensions affect the feasibility of implementation and the effectiveness of policies (Capano and Howlett 2024). The classification of policy instruments at the micro-level can be highly valuable for both scholars and practitioners, as it generates knowledge about the operational aspects of policy design and allows for a more precise visualization of the implementation process (Bali et al. 2024; Lui et al. 2025). Capano and Lepori (2024) demonstrate that coherence between ideas and objectives, as well as the characteristics of the instruments, particularly how they operate and interact with target groups, shapes how organizations implement policies. Peters et al. (2018) argue that synergy among design elements is key to achieving policy effectiveness. Similarly, Siddiki (2020) highlights that interactions between design elements determine policy outcomes. Additionally, intensity, density, objective coherence, instrument consistency, credibility, and scope influence how organizations respond to policy designs (Capano and Howlett 2024).

Chart 1 presents the analytical dimensions of policy instruments. Two distinctions are adopted: the first refers to instrument *class*, substantive versus procedural (Howlett 2018); the second distinguishes instruments by *type*, based on their fundamental characteristics. For this purpose, we adopt Hood's (1983) framework, which typifies instruments according to the governmental resources mobilized for their operation: nodality, treasure, organization, and authority.

Wellstead and Howlett (2024) argue that substantive instruments are linked to the notion of the designing of services, as they focus on concrete outcomes and delivery efficiency. Procedural instruments, in contrast, relate to the idea of designing "for" services, as they emphasize trust-building and stakeholder engagement through participation, coordination, consultation, and co-creation. The combined analysis of instrument classes and types enables identification of the implementation style and the preferred approaches governments adopt to operationalize policies (Howlett 2000). Historical and institutional contexts shape these styles, revealing patterns of instrument application critical for translating abstract policy goals into concrete actions.

Finally, the proposed analytical framework provides a detailed understanding of the mechanisms through which policies generate outcomes. Rather than limiting itself to a macro-level design analysis, it captures the complex architecture of instrumental arrangements, revealing the conditions that shape the dynamics and performance of public policies (Bali et al. 2022). In this research, we argue that one way to generate knowledge about the interaction between policy design and implementation is to focus on the calibration of instruments and how procedural and substantive instruments are combined in policy design. The implementation style will depend on this arrangement.

We adopt this model to analyze the digital transformation policies of Brazilian states and to understand their institutional design, including the configuration of their regulatory and organizational arrangements. The analysis also seeks to identify the composition and characteristics of the instrument combinations mobilized in each state, and to examine how these instruments interact during the formulation process. Finally, we investigate how the arrangement and use of these combined instruments influence the implementation and the outcomes observed in state-level digital transformation policies. Chart 2 shows examples of instruments based on the intersection of classes and types.

Chart 1. Analytical dimension of policy instruments

Category	Code	Concept
Classes	*Procedural*	They operate indirectly, regulating interactions between the state and social actors, shaping decision-making dynamics, and enabling continuous adjustment of goals and instruments in response to contextual changes. These instruments organize, facilitate, or influence interactions among actors in decision-making processes. They include administrative and political activities aimed at selecting, implementing, and calibrating substantive instruments. Their primary purpose is to support and legitimize decision-making and implementation.
	Substantive	They act directly on the production, distribution, and delivery of goods and services, exerting immediate influence on policy outcomes. These instruments implement the ultimate goals and objectives of public policies.
Types	*Nodality*	Instruments involving the production and dissemination of information.
	Authority	Instruments that rely on the state's legal authority to establish rules and standards and to determine who participates in decision-making processes.
	Treasure	Economic instruments designed to influence actors' behavior through financial incentives.
	Organizational	Instruments that provide the capacity for action, either directly through state bureaucracies or indirectly through non-state organizations and governance networks. These instruments are related to the organization of action and decision-making processes.

Source: Author's elaboration based on Hood (1983) and Howlett (2000).

Methodology

This study adopts a qualitative research strategy to examine how the micro-dimensions of digital transformation policies in Brazilian states are configured through instrumental choices. The methodology was designed to ensure analytical rigor, transparency, and reproducibility, particularly in classifying instruments, analyzing their interactions, and their combined effects on the implementation process of digital transformation policies.

The analytical framework draws on the theoretical contributions of Hood (1983) and Howlett (2000), who distinguish policy instruments by types (nodality, authority, treasure, and organization) and by classes (procedural and substantive). Building on recent advances in the literature (Bali et al. 2024; Capano and Howlett 2024), we incorporated

Chart 2. Examples of instruments by intersection of classes and types

		Types			
		Nodality	**Treasure**	**Organization**	**Authority**
Classes	Procedural	Training courses for the bureaucracy	Allocation of resources to support the policy; conditional transfers; Performance-based bonus for civil servants	Allocation of infrastructure and staff necessary for support activities	Regulation of cooperation between government agencies; Definition of roles and responsibilities
	Substantive	Delivery of information to the public; Awareness campaigns	Definition of incentives for political engagement; Fines, Cashbacks, Fees, Rewards	Allocation of infrastructure and staff necessary for service delivery	Definition of the governance process

Source: Author's elaboration based on Hood (1983) and Howlett (2000).

a micro-analytical perspective focused on how combinations of instruments reflect policymakers' choices in response to contextual dilemmas.

To adapt the analytical framework to the digital policy domain, the model was expanded to include instruments specific to the digital environment, such as cloud computing, algorithmic platforms, data governance structures, and chatbots (Mergel et al. 2019). These instruments were treated as organizational and nodality categories subtypes, and coded accordingly.

Corpus Construction

The empirical material consists of 59 official normative documents, including ordinances, decrees, laws, and resolutions, that define the state-level digital transformation strategies published between 2019 and 2025. All materials were collected in January 2025 from official government websites and repositories. Appendix A contains the documents analyzed.

Coding Process and Validation

The documents were stored as shared files in a cloud-based service. Three researchers with expertise in policy design conducted the annotation process to ensure reliability (Sewerin et al. 2023). Relevant elements were manually identified in the texts, highlighted, and coded using the commenting function in shared digital documents.

Based on the analytical framework, a structured coding protocol was developed to classify policy instruments. The coding process unfolded in three stages:

1. *Initial Coding*: Conducted manually by a trained research assistant with experience in policy design, using document markup and annotation tools. A researcher with expertise in the relevant literature and prior experience in manual coding of this type subsequently reviewed the material.
2. *Secondary Review*: Conducted by a senior researcher specializing in instrument typologies and digital government, to refine and validate the classifications.
3. *Final Validation*: During a joint session with all three coders, consensus resolved inconsistencies, and decisions were recorded to ensure reliability and transparency.

This multi-stage process ensured internal validity through researcher triangulation and reduced subjectivity in instrument classification. The categorization emphasized both the formal function of the instrument (e.g., regulation, coordination, financing) and its material form (e.g., platform, committee, chatbot).

Comparative Methodology

Classifying instruments by class and type enabled the construction of a structured database, allowing for systematic case comparisons. Following Sewerin et al. (2023), this procedure transforms qualitative documents into comparable data, enhancing analytical rigor. This approach enabled the identification of patterns, redundancies, and gaps in instrumental arrangements. As a result, we establish a comparative methodology to link instrument choices with variations in policy outcomes, thereby revealing implementation styles.

Integration of Digital Instrument Typology

Recognizing the specificities of digital transformation, we coded digital instruments explicitly within the organizational and nodality categories. This approach responds to the growing literature on digital tools as distinct elements within policy instrument arrangements (Bali et al. 2021). Instruments were analyzed in terms of their functionality, integration into broader institutional structures, and role in mediating implementation dynamics.

Results and Discussion

Instrument Classes' Analysis

The comparative analysis of Brazilian states revealed a markedly heterogeneous distribution across instrument classes and types. In particular, the following analysis prioritizes the categorical distinction between these classes to underscore their functional roles. At the national level, procedural instruments ($n = 105$) were more prevalent than substantive instruments ($n = 81$). This predominance suggests that state governments have prioritized mechanisms for coordination, participation, and organizational arrangements over measures directly oriented toward providing goods and services. In other words, the findings indicate that digital transformation policies in Brazilian states have been more strongly

focused on governance, process management, and decision-making structures, with a lower reliance on direct coercive or service-delivery instruments (Howlett 2000).

Based on Table 1, it is evident that the states of Roraima (RR), Tocantins (TO), Maranhão (MA), and Minas Gerais (MG) have the fewest instruments for implementing public policies, each with only one or two instruments. This scarcity is accompanied by imbalances in the instrument mix, indicating a fragile policy design. These states, for instance, demonstrate the presence of authority and organization instruments without nodality and treasury instruments (as in the case of Minas Gerais) or lack any authority instrument that would guide bureaucratic action in implementing policy or coordinating organizational instruments (as in Roraima, Amazonas (AM), Piauí (PI), Rondônia (RO), Tocantins, and Maranhão). Notably, all the states analyzed have at least one organizational instrument.

This pattern reveals a flawed instrument mix across Brazilian states: even when certain forms of normative capacity (authority) or information dissemination (nodality) are present, the absence of financial incentive structures (treasure) undermines the operationalization of policy measures. Without these elements, the minimum conditions for implementing public policies in a coordinated and effective manner are compromised, threatening policy effectiveness in these states. Finally, the implementation style of digital transformation policy across Brazilian states appears highly heterogeneous, reflecting the significant disparity in the instruments available to each federative unit.

Substantive instruments implement the goals and final objectives of public policies by directly influencing the production of goods, service delivery, or the regulation of social behaviors, whereas procedural instruments are defined as techniques or mechanisms designed to influence how a policy is formulated and implemented (Bali et al. 2021). This includes administrative processes and activities related to selecting, deploying, and calibrating substantive instruments. Although procedural instruments do not directly affect outcomes like substantive instruments, such as taxes, regulations, sanctions, and fees, they are often necessary to function effectively. The literature argues that the effectiveness of substantive instruments depends on the appropriate use of procedural instruments, as they are mutually reinforcing (Howlett 2018).

According to Bali et al. (2021), procedural instruments may not directly shape outcomes as substantives do, but they are essential to ensuring their effective operation or, in cases such as sectoral consultations or public hearings, to increasing legitimacy and compliance. In this sense, procedural instruments enhance the potential effectiveness of substantive ones by reducing information asymmetries and mitigating internal resistance within state bureaucracies, as they create rules, define authority, establish governance structures, and form deliberative councils to align ideas and build consensus.

Analysis of Brazil's digital transformation policy demonstrates significant variation in the use of these instruments among states. A few states have robust portfolios, with a relatively balanced distribution of NATO categories, whereas most display a limited number of procedural instruments.

The procedural instrument mix in the state of Goiás (located in the Central-West region) comprises a variety of initiatives that mobilize different types of resources. The State Governance Committee of the Expresso Program, the User Council of Public Services of Goiás, and the Laboratory for Transformation of Management and Public Services of Goiás are among the organizational instruments. Under authority, the

Table 1. Intersection between classes and types of instruments in state-level digital transformation policies

FU	Class	Total per class	Authority	Nodality	Organization	Treasure
Acre	Procedural	5	0	1	4	0
(AC)	Substantive	6	4	1	1	0
Alagoas	Procedural	9	1	0	8	0
(AL)	Substantive	5	2	1	2	0
Amapá	Procedural	2	0	0	2	0
(AP)	Substantive	2	1	0	1	0
Amazonas	Procedural	5	0	0	5	0
(AM)	Substantive	1	0	0	1	0
Bahia	Procedural	3	0	0	3	0
(BA)	Substantive	3	1	0	2	0
Ceará	Procedural	15	0	0	15	0
(CE)	Substantive	5	1	1	3	0
Distrito Federal	Procedural	2	0	0	2	0
(DF)	Substantive	3	3	0	0	0
Espírito Santo	Procedural	7	2	2	3	0
(ES)	Substantive	4	0	2	2	0
Goiás	Procedural	9	3	2	3	1
(GO)	Substantive	6	3	1	2	0
Maranhão	Procedural	1	0	0	1	0
(MA)	Substantive	0	0	0	0	0
Mato Grosso	Procedural	5	0	0	5	0
(MT)	Substantive	4	2	1	1	0
Mato Grosso do Sul	Procedural	1	0	0	1	0
(MS)	Substantive	4	2	1	1	0
Minas Gerais	Procedural	1	0	0	1	0
(MG)	Substantive	1	1	0	0	0
Paraá	Procedural	1	0	0	1	0
(PA)	Substantive	3	1	0	1	1
Paraíba	Procedural	5	0	0	5	0
(PB)	Substantive	3	1	0	2	0
Paraná	Procedural	3	1	2	0	0
(PR)	Substantive	3	1	1	1	0
Pernambuco	Procedural	8	0	4	4	0
(PE)	Substantive	3	1	1	1	0
Piauí	Procedural	4	0	0	4	0
(PI)	Substantive	2	0	1	1	0
Rio de Janeiro	Procedural	8	0	2	6	0
(RJ)	Substantive	9	4	1	3	1
Rio Grande do Sul	Procedural	3	0	0	3	0
(RS)	Substantive	5	3	0	2	0
Rondônia	Procedural	4	0	3	1	0
(RO)	Substantive	3	0	1	2	0
São Paulo	Procedural	0	0	0	0	0
(SP)	Substantive	3	1	1	1	0
Roraima	Procedural	1	0	0	1	0
(RR)	Substantive	0	0	0	0	0
Sergipe	Procedural	2	0	0	2	0
(SE)	Substantive	2	0	1	1	0
Tocantins	Procedural	1	0	0	1	0
(TO)	Substantive	1	0	0	1	0
Total per type		–	**39**	**31**	**113**	**3**

Source: Author's elaboration.

Transformation Network of Public Services and the Public Services Transformation Journey stand out. Regarding nodality, the Management Maturity Index and the Regulatory Impact Assessment are included. The Training and Management Modernization Fund (FUNCAM) represents the Treasury instruments.

The study also identified intraregional inequalities, including among neighboring states in the Southeast region, Rio de Janeiro (RJ), São Paulo (SP), Minas Gerais, and Espírito Santo (ES). Rio de Janeiro's procedural instrument mix is composed mainly of organizational tools, including the Quality Network of Digital Services, the Open Data Network, the Unifica RJ Network, the SEI-RJ Network, the Information and Communication Technology (ICT) Network, and the RJ Digital Municipalities Network. In nodality, the state has developed the Digital Government Maturity Index, the Digital Maturity Award, and the Digital Impact Dashboard, a tool for monitoring the State Digital Government Strategy (EEGD). Regarding substantive instruments, Rio de Janeiro's digital transformation policy is structured across all four NATO categories, which operate in an integrated manner. Nodality also includes the Public Digital Services Satisfaction Survey, which collects citizen feedback to guide service improvements. Authority instruments include strategic and regulatory tools such as the Strategic and Master Plan for Information and Communication Technology (PEDTIC), the Service Digitalization Plan, and the Open Data Plan, which set guidelines for digital modernization and data openness.

Organizational instruments encompass operational structures such as the RJ Digital Portal, the Privacy and Personal Data Protection Governance System, and the Internal Governance Program, which ensure access to services, data protection, and legal compliance. In the treasure typology, the Digital Maturity Award – Executive Branch Category is an incentive that recognizes leaders who excel at implementing digital practices. Conversely, neighboring states such as São Paulo and Minas Gerais have extremely limited substantive instrument portfolios and no procedural instruments in their digital policy. São Paulo, for example, has only three substantive instruments, while Minas Gerais has a single organizational substantive instrument: the State Government ICT Committee (Cetic). In such cases, the limited instrument mix severely undermines bureaucratic capacity to guide action and, consequently, policy effectiveness.

As Bali et al. (2021) emphasize, substantive policy instruments act directly upon problematic conditions or influence the behavior of social and economic actors through mechanisms such as subsidies, taxes, tariffs, regulations, service provision, or state-owned enterprises. Disparities in instrument selection are also found among neighboring states in the Northern region. Pará's digital transformation policy reflects the territorial and social specificities of the Amazon, with substantive instruments distributed across the authority, treasure, and organizational categories, with particular focus on expanding internet access and digital inclusion. The Strategic Digital Transformation Plan (PETD) establishes guidelines for modernizing public services and integrating state technology in the authority category. In the treasury, a credit program for Internet Service Providers and Small Service Providers (ISPs/SSPs) aims to foster connectivity infrastructure in remote areas, recognizing that network access is a prerequisite for digital progress in the Amazon. Complementing these efforts, organizational instruments include digital literacy programs in schools, designed to train students and educators and promote a digital culture from the ground up. This combination of instruments demonstrates a policy

sensitive to local needs, combining strategic planning, financial incentives, and citizen education to ensure that digital transformation reaches all areas of Pará.

This situation is markedly different from that of Amazonas, a neighboring state in the Brazilian Amazon, whose digital transformation policy relies on a highly limited mix of instruments. Substantive instruments consist of a single organizational mechanism established in its formal decree, "Partnerships and agreements with institutes, universities, and public or private institutions", and five procedural instruments, all focused on establishing advisory committees. This composition indicates extremely low policy effectiveness, as there are no clear incentives to ensure cohesive bureaucratic engagement or coordinated implementation. Unlike Pará, Amazonas lacks both strategic digital transformation plans and a strong focus on citizen connectivity.

States in the Northeast exhibit some degree of similarity, with variation in both the number and diversity of instruments. All states have between two and five substantive instruments. Alagoas (AL) and Ceará (CE) are the most structured, with five instruments each, ranging from strategies and policies to service platforms and service charters, reflecting a broad and integrated approach. Conversely, PI and Sergipe (SE) have only two instruments, which may reflect lower digital maturity or a deliberate focus on specific initiatives. Diversity of instrument types is another significant factor: states such as AL, CE, and Pernambuco (PE) encompass all three NATO categories – Authority, Organization, and Nodality – demonstrating a more comprehensive and articulated strategy. While having fewer instruments, Bahia (BA) and Paraíba (PB) emphasize organizational measures, prioritizing digital service platforms and transformation plans, suggesting a strong focus on technological infrastructure and strategic planning.

This heterogeneity shows that some states adopt similar patterns in selecting their instrument mixes even within the same region. In authority, formal plans and strategies stand out, including Alagoas' Digital Government Strategy and Policy, Bahia's Digital Transformation Plan, Ceará's Digital Transformation Strategy, Pernambuco's Digital Government Action Plan, and Paraíba's Digital Transformation Plans. Organizational instruments emphasize digital public service platforms, such as SAC Digital (Bahia), Ceará Digital, Piauí Digital, Sergipe's Integrated Services Portal, and other platforms in Alagoas and Pernambuco. In the context of nodality, Service Charters are widely adopted (AL, CE, PE, PI, and SE), signaling a standardized approach to citizen communication. Thus, states articulate their policies through three main fronts: strategic directives (authority), organizational and technological mechanisms (organization), and instruments of transparency and citizen engagement (nodality). No treasure instruments were found among the cases studied.

Balance Between Instrument Classes (Procedural and Substantive)

The balance or predominance of a particular class and type of instrument shapes the implementation style adopted by each Brazilian state. The effectiveness of digital transformation in the public sector depends on the synergistic combination of procedural and substantive instruments. Procedural instruments are essential for organizing state action: they define how agencies interact internally through committees or similar agencies, regulate data sharing, establish administrative routines through authority-

based mechanisms, and create coordination and governance structures, conditions necessary to overcome data silo logics and enable the construction of an integrated digital platform. In the case of digital transformation policy, these instruments structure the institutional environment, allowing the agencies to overcome collaboration barriers, integrate systems, establish rules and incentives for data sharing, and operate in a coordinated manner (Filgueiras et al. 2019)

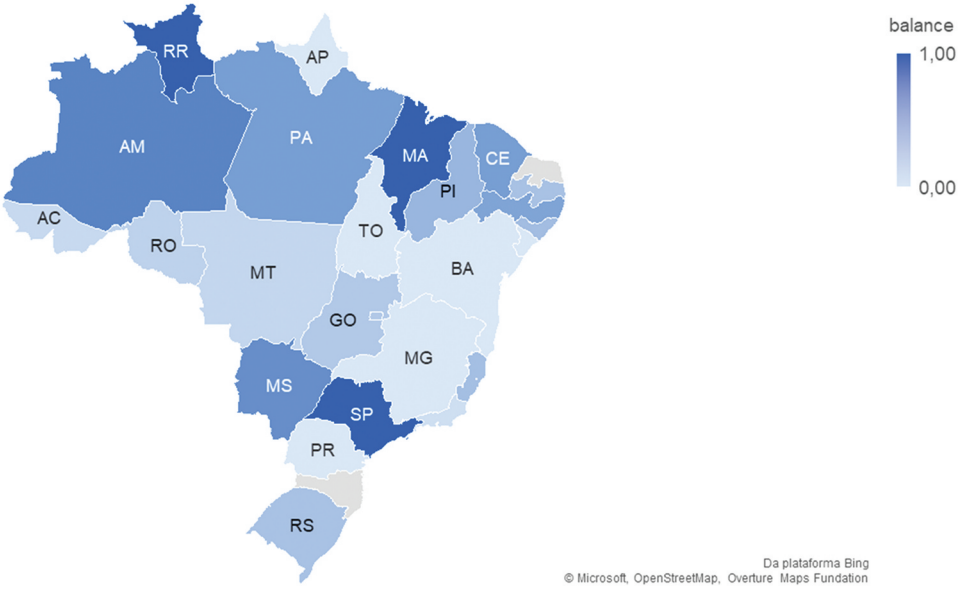
Substantive instruments, in turn, materialize digital transformation for citizens. The effective delivery of public services through digital platforms embodies the public value of this agenda and fulfills the core premise of placing citizens at the center of policy. Substantive instruments also define rights and rules, inform citizens about their entitlements, and seek to build incentives for civic participation. Examples include creating a single-login system, incentive structures to encourage multi-actor engagement, regulation of platform use, and communication instruments targeting citizens. Thus, digital transformation goes beyond mere service digitization; it requires institutional and technical engineering capable of sustaining and scaling transformation over time (Filgueiras et al. 2019). Combining these two classes of instruments is key to aligning the endogenous organization of the state with the long-term delivery of public value.

This study argues that a balance between procedural and substantive instruments is a meaningful indicator of a policy's implementation style. While procedural instruments organize relationships among actors, establish routines, and enable coordination, substantive instruments deliver goods and services directly to the population. When substantive instruments dominate without adequate procedural support, policies often face fragmentation, duplication of efforts, and limited adherence from government agencies responsible for service delivery. Conversely, overreliance on procedural instruments can lead to excessive regulation with little tangible output. The more balanced the combination between these instruments, the greater the likelihood of coherent, coordinated, and effective implementation. As Mergel et al. (2019) emphasize, key barriers to digital transformation include organizational resistance to change, insufficient technical competencies and managerial support, as well as budget constraints and challenges in integrating legacy systems and breaking down data silos. Reconciling these two classes of instruments is thus critical to organizing the state apparatus internally and ensuring effective service delivery to citizens.

To measure the degree of balance between procedural and substantive instruments, we employ a simple formula: ABS ((B – C) / (B + C)), where B represents the number of procedural instruments and C the number of substantive instruments. This calculation provides a measure of the relative imbalance between the two types. Values closer to 0 indicate a more balanced distribution, meaning the state relies on comparable numbers of both instrument types. Values closer to 1 indicate a significant imbalance, reflecting the dominance of one type over the other. The absolute value (ABS) focuses solely on the magnitude of the imbalance.

Of course, different policy contexts may warrant emphasizing one type of instrument over the other. However, for this research, we opted for a straightforward calculation to illustrate how some states disproportionately focus on one instrument class. We argue that such imbalances may shape bureaucratic behavior during implementation and ultimately compromise policy effectiveness. Figure 1 illustrates this distribution: some states, such as Bahia, Paraná, Rio Grande do Sul, and Rio de Janeiro (in light blue),

Figure 1. Map of Brazilian states and their balance between procedural and substantive instruments



display near-zero balance, with roughly equal numbers of procedural and substantive instruments, while others, such as São Paulo and Maranhão, show heavy reliance on one type at the expense of the other.

As Wellstead and Howlett (2024) argued, substantive instruments are linked to the design of services. These tools directly influence the regulation, production, distribution, and delivery of goods and services. Their primary focus lies in efficiency and tangible policy outcomes, thereby generating public value. Procedural instruments, by contrast, are tied to the design for services. While they do not directly alter the delivery of goods and services, they shape bureaucratic behavior and strengthen the legitimacy of policy-making processes. They focus on fostering trust, legitimacy, and societal acceptance of policies. Thus, whereas the design of services aims to maximize results and efficiency through the calibration of substantive instruments, the design for services seeks to ensure legitimacy and social buy-in through the appropriate configuration of procedural instruments. Both require macro- and micro-level decisions regarding tool selection and calibration, with policy effectiveness ultimately depending on the suitability of these choices.

For digital transformation policy to be effective, investment in technology or infrastructure alone is insufficient; robust governance mechanisms are required to coordinate autonomous organizations, establish shared standards across government agencies and departments, and ensure interorganizational cooperation (Wilson and Mergel 2022). Digital transformation thus demands technical solutions and, more importantly, strong political coordination and negotiation among state actors to align objectives,

integrate processes, and ensure coherence in service delivery. A central obstacle is the persistence of "data silos", in which public agencies operate in isolation, using fragmented, non-integrated systems. This pattern undermines interoperability and exposes a lack of political–institutional coordination. Because the ultimate goal of digital transformation is to deliver services to citizens through integrated digital platforms, the policy design must harmonize procedural and substantive instruments. The absence of either class of instruments severely undermines the chances of effective implementation by creating structural and operational barriers. Analysis of Brazilian states reveals that, in some cases, the balance between procedural and substantive instruments is highly uneven (as shown in Table 1), with some states presenting very few instruments overall, signaling risks to both implementation and policy effectiveness.

Finally, it is worth emphasizing that combinations across classes (substantive and procedural) and types (treasure, organization, authority, and nodality) produce distinct implementation styles. Substantive instruments associated with treasury tend to foster more incentive-driven implementation styles, leaving limited discretion for implementers and citizens, resulting in a highly operational policy orientation as financial incentives are deployed to shape behavior – such as fines, rewards, cash-backs. Organizational instruments support a managerial and structural implementation style, strengthening administrative capacity and the state bureaucracy while centralizing policies within executive bodies. Authority-based instruments tend to adopt more normative and coercive approaches, relying on rules, standards, and regulations to promote uniformity in implementation practices. Nodality-driven instruments, on the other hand, encourage voluntarist implementation, leveraging cognitive influence over agents, which is subject to bias, communication skills and limited oversight.

Procedural instruments, by contrast, foster more collaborative, participatory, and adaptive implementation styles by structuring decision-making processes and reinforcing political legitimacy. When combined with treasure-based instruments, they generate a dynamic of incentivized collaboration. This synergy is operationalized through the strategic resource allocation, including conditional financial transfers, performance-based incentives for administrative agencies, and related funding mechanisms. Organizational procedural instruments strengthen interinstitutional coordination, create committees for dialogue and alignment, and establish collaborative arrangements among agencies and actors for shared governance. Authority-based procedural tools regulate the conduct of government agencies and bureaucratic actors, shaping administrative practices and creating incentives for cooperation; they support participatory and adaptive approaches, in which rules and regulations are deliberatively constructed, enabling incremental adjustments and greater social legitimacy. Nodality-based procedural instruments cultivate a dialogic and inclusive environment by leveraging communication and information-sharing to engage the bureaucracy and other stakeholders, enabling more open and responsive implementation.

In this sense, the literature emphasizes that procedural instruments, historically underexplored, are crucial for shaping policy mixes and ensuring consistency, congruence, and resilience of policies over time (Howlett 2019; Bali et al. 2021; Migone and Howlett 2024). The analysis thus demonstrates that different combinations of substantive and procedural instruments inform technical choices and shape implementation styles with significant implications for policy effectiveness.

This study has limitations. First, it was not yet possible to develop objective metrics to measure the outcomes of digital transformation policies in the states analyzed, as many of these initiatives are still in the early stages. We acknowledge that simply asserting the existence of an imbalance between procedural and substantive instruments is, in itself, analytically limited, as a small overall number of instruments – distributed in similar proportions – may artificially suggest a low degree of imbalance, without necessarily reflecting a substantively meaningful equilibrium. Furthermore, the analysis is limited to the Brazilian case.

Future studies could deepen this analysis by cross-referencing the regulatory patterns identified with distinct sociodemographic variables and economic profiles, such as agricultural, industrial, or service-based states. Other investigations could also examine whether certain instruments are disseminated across Brazilian states, according to party alignment or even contact between leading bureaucracies, and also analyze how the mix of procedural instruments can provide insight into the capacity for policy coordination, both horizontal and vertical, as well as interactions with civil society.

Conclusion

The research aimed to answer how digital transformation policies at the state level are designed in Brazil; what the composition and nature of the combinations of instruments used in these policy designs are; and finally how, considering the interactions between instruments, these dynamics shape the style of policy implementation. The data and discussions aimed to answer these three questions. This study sought to advance the field of policy design by refining the analytical lens applied to policy instruments. It argues that how policy mixes are conceived, balancing procedural and substantive instruments, directly shapes implementation processes and affects policy effectiveness. Building on the propositions of Bali, Howlett, and colleagues (Howlett 2019; Bali et al. 2021; Migone and Howlett 2024), the study contributes new empirical evidence on the Brazilian case. Specifically, it examined the institutional design of state-level digital transformation policies, analyzed the composition and characteristics of the instrument combinations employed, and explored how their interactions influence implementation styles.

Our analysis revealed significant variation across Brazilian states in the configuration of their instrumental arrangements. Some states focused primarily on substantive instruments associated with authority and organization (e.g., Acre (AC), Distrito Federal (DF), RJ, Rio Grande do Sul (RS)), emphasizing the formulation of plans and strategies and the development of digital platforms and portals. Others emphasized procedural instruments related to nodality and organization, prioritizing the creation of databases, indicators, reports, and governance structures such as committees, councils, networks, and working groups (e.g., ES, Goiás (GO), Paraná (PR), PE, RO).

This diversity suggests that different instrumental configurations directly impact implementation styles: more substantively oriented combinations tend to produce technically and operationally focused policies, while more procedurally oriented arrangements foster greater legitimacy, cross-sectoral coordination, and adaptability over time. The policy design literature underscores that the robustness and effectiveness of public policies depend not merely on the isolated selection of instruments but on their coherence, consistency, and congruence across classes and types (Howlett 2019, 2000; Capano and Howlett 2020; Bali

et al. 2022; Migone and Howlett 2024). The observed variation among Brazilian states empirically supports the proposition that balanced combinations of procedural and substantive instruments, distributed across nodality, authority, treasure, and organization, are decisive for shaping more effective and resilient implementation styles.

These findings highlight that analyzing the micro-dimensions of policy design is not merely a theoretical exercise but a practical tool for public managers and policymakers. By identifying how different combinations of instruments shape implementation styles, this study provides valuable insights for aligning strategic objectives with more coherent, adaptive instrumental choices. Recent literature further suggests that micro-level design analysis enables instrument calibration, reduces inconsistencies, and anticipates potential implementation failures (Howlett 2019; Capano and Howlett 2020; Wellstead and Howlett 2024). Thus, by revealing the diversity of instrumental arrangements across Brazilian states, this research contributes to practice by demonstrating that high-quality design ensures consistency, legitimacy, and resilience in digital transformation policies, offering concrete pathways to improve governance and deliver digital services.

Disclosure Statement

No potential conflict of interest was reported by the author(s).

Data Availability

The data that support the findings of this study are available from the corresponding author.

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ORCID

Lizandro Lui http://orcid.org/0000-0002-9276-247X
Thayná Gomes Rosa http://orcid.org/0009-0000-9871-7322
Rafael Barbosa de Aguiar http://orcid.org/0000-0002-2418-6845
Luciana Leite Lima http://orcid.org/0000-0002-8761-4114

References

Acciai, C. and Capano, G., 2021, Policy instruments at work: A meta-analysis of their applications. *Public Administration*, **99**(1), pp. 118–136. doi:10.1111/padm.12673

Bali, A. S., Capano, G., and Ramesh, M., 2024, The micro-dimensions of health policy design: Evidence from a comparative analysis. *Policy Design and Practice*, **7**(2), pp. 129–143. doi:10.1080/25741292.2024.2356332

Bali, A. S., Howlett, M., Lewis, J. M., and Ramesh, M., 2021, Procedural policy tools in theory and practice. *Policy and Society*, **40**(3), pp. 295–311. doi:10.1080/14494035.2021.1965379

Bali, A. S., Howlett, M., and Ramesh, M., 2022, Unpacking policy portfolios: Primary and secondary aspects of tool use in policy mixes. *Journal of Asian Public Policy*, **15**(3), pp. 321–337. doi:10.1080/17516234.2021.1907653

Bonduki, M. and Cunha, M. A., 2023, Carrots, sticks, or guidance? Analyzing coordination instruments for digital transformation in federations using a governance framework, in: *Proceedings of the 16th International Conference on Theory and Practice of Electronic Governance*, 143–150, Association for Computing Machinery, New York, NY. doi:10.1145/3614321.3614342

Brasil, 2024, *Decree No. 12,198 of September 24, 2024: Establishes the Federal Digital Government Strategy for the 2024–2027 period and the National Data Infrastructure within the scope of the direct, autonomous, and foundational federal public administration* (Presidency of the Republic). https://www.planalto.gov.br/ccivil_03/_ato2023-2026/2024/decreto/d12198.htm

Brazil, 2016, *Estratégia Nacional de Governo Digital*. https://www.gov.br/governodigital/pt-br/estrategias-e-governanca-digital/estrategianacional

Capano, G. and Howlett, M., 2020, The knowns and unknowns of policy instrument analysis: Policy tools and the current research agenda on policy mixes. *Sage Open*, **10**(1), p. 2158244019900568. doi:10.1177/2158244019900568

Capano, G. and Howlett, M., 2024, Calibration and specification in policy practice: Micro-dimensions of policy design. *Policy Design and Practice*, **7**(2), pp. 115–128. doi:10.1080/25741292.2024.2353929

Capano, G. and Lepori, B., 2024, Designing policies that could work: Understanding the interaction between policy design spaces and organizational responses in public sector. *Policy Sciences*, **57**(1), pp. 53–82. doi:10.1007/s11077-024-09521-0

Filgueiras, F., Flávio, C., and Palotti, P., 2019, Digital transformation and public service delivery in Brazil. *Latin American Policy*, **10**(2), pp. 195–219.

Filgueiras, F., Lui, L., Rosa, T. G., and Candido Ferreira, G., 2025, The institutional design of data governance in Brazil: Entropy, restrictiveness and institutional grammar. *Policy Design and Practice*, **8**(1), pp. 64–88.

Hood, C. C., 1983, *The Tools of Government*, 1st ed. (Chatham: The Macmillan Press Ltd).

Howlett, M., 2000, Managing the "hollow state": Procedural policy instruments and modern governance. *Canadian Public Administration*, **43**(4), pp. 412–431. doi:10.1111/j.1754-7121.2000.tb01152.x

Howlett, M., 2018, Policy instruments and policy design choices: Selecting substantive and procedural tools in public policymaking, in: M. Howlett and I. Mukherjee (Eds) *Routledge Handbook of Policy Design* (London: Routledge), pp. 77–86.

Howlett, M., 2019, Procedural policy tools and the temporal dimensions of policy design. Resilience, robustness and the sequencing of policy mixes. *International Review of Public Policy*, **1**(**1**: **1**), pp. 27–45.

Lui, L., Lima, L. L., and Aguiar, R. B. D., 2025, Micro-dimensions in practice: How do Argentina and Brazil shape digital transformation through instrumental choices? *Policy Design and Practice*, **8**(4), pp. 442–457. doi:10.1080/25741292.2025.2545668

Mergel, I., Edelmann, N., and Haug, N., 2019, Defining digital transformation: Results from expert interviews. *Government Information Quarterly*, **36**(4), p. 101385. doi:10.1016/j.giq.2019.06.002

Migone, A. and Howlett, M., 2024, The purpose of policy portfolios: Design, intention, and logic. *Journal of Public Policy*, **44**(4), pp. 809–825. doi:10.1017/S0143814X24000229

Newman, J. and Nurfaiza, M. W., 2022, Policy design, non-design, and anti-design: The regulation of e-cigarettes in Indonesia. *Policy Studies*, **43**(2), pp. 226–243. doi:10.1080/01442872.2019.1708887

Petek, A., Baketa, N., Kekez, A., Kovačić, M., Munta, M., Petković, K., Šinko, M., and Zgurić, B., 2021, Unboxing the vague notion of policy goals: Comparison of Croatian public policies. *European Policy Analysis*, **7**(2), pp. 451–469. doi:10.1002/epa2.1106

Peters, B. G., Capano, G., Howlett, M., Mukherjee, I., Chou, M. H., and Ravinet, P., 2018, *Designing for Policy Effectiveness: Defining and Understanding a Concept* (Cambridge: Cambridge University Press).

Sewerin, S., Fesenfeld, L. P., and Schmidt, T. S., 2023, The role of policy design in policy continuation and ratcheting-up of policy ambition. *Policy and Society*, **42**(4), pp. 478–492. doi:10.1093/polsoc/puad027

Siddiki, S., 2020, *Understanding and Analyzing Public Policy Design* (Cambridge: Cambridge University Press).

Vedung, E., 1998, Policy instruments: Typologies and theories, in: M.-L. Bemelmans-Videc, R. Rist, and E. Vedung (Eds) *Carrots, Sticks and Sermons: Policy Instruments and Their Evaluation* (New Brunswick, NJ: Transaction), pp. 21–58.

Wellstead, A. and Howlett, M., 2024, Public value and procedural policy instrument specifications in "design for service." *Policy Design and Practice*, **7**(2), pp. 144–157. doi:10.1080/25741292.2024.2337095

Wilson, C. and Mergel, I., 2022, Overcoming barriers to digital government: Mapping the strategies of digital champions. *Government Information Quarterly*, **39**(2), p. 101681. doi:10.1016/j.giq.2022.101681

Appendix A. State Normative Acts

State (UF)	Type of Normative Act	Number/Year
ACRE	Decree	11,425/2024
ACRE	Decree	11,634/2025
ACRE	Decree	11,200/2023
ALAGOAS	Law	9,272/2024
ALAGOAS	Decree	95,980/2024
ALAGOAS	Decree	90,296/2023
ALAGOAS	Decree	91,824/2023
AMAPÁ	Decree	3,830/2020
AMAZOAS	Law	6,837/2024
AMAZONAS	Decree	49,641/2024
BAHIA	Decree	22,269/2023
BAHIA	Decree	21,452/2022
BAHIA	Decree	22,362/2023
CEARÁ	Decree	35,689/2023
CEARÁ	Decree	34,895/2022
CEARÁ	Decree	34,435/2021
CEARÁ	Decree	34,807/2022
CEARÁ	Decree	16,727/2018
CEARÁ	Decree	34,769/2022
DISTRITO FEDERAL	Ordinance	298/2025
DISTRITO FEDERAL	Decree	40,253/2019
ESPÍRITO SANTO	Decree	5,778/2024
ESPÍRITO SANTO	Complementary Law	1,063/2023
GOIÁS	Decree	9,668/2020
GOIÁS	Decree	10,058/2022
GOIÁS	Law	20,846/2020
MARANHÃO	Decree	39,153/2024
MATO GROSSO	Decree	338/2023
MATO GROSSO	Decree	951/2021
MATO GROSSO	Resolution	002/2023
MATO GROSSO DO SUL	Decree	16,403/2024
MATO GROSSO DO SUL	Decree	16,404/2024
MINAS GERAIS	Decree	48,937/2024
MINAS GERAIS	Decree	48,383/2022
PARÁ	Decree	4,473/2025
PARAÍBA	Decree	41,507/2021
PARAÍBA	Decree	39,815/2019
PARAÍBA	Decree	46,439/2025
PARANÁ	Decree	5,512/2024
PERNANBUCO	Decree	58,283/2025
PERNANBUCO	Decree	56,434/2024
PIAUÍ	Decree	23,710/2025
PIAUÍ	Decree	21,979/2023

(*continued*)

(*Continued*)

State (UF)	Type of Normative Act	Number/Year
RIO DE JANEIRO	Decree	49,326/2024
RIO DE JANEIRO	Decree	48,012/2022
RIO DE JANEIRO	Decree	48,672/2023
RIO DE JANEIRO	Decree	48,671/2023
RIO DE JANEIRO	Law	9,128/2020
RIO DE JANEIRO	Joint Resolution	05/2024
RIO GRANDE DO SUL	Decree	57,547/2024
RIO GRANDE DO SUL	Decree	57,549/2024
RONDÔNIA	Decree	29,168/2024
RORAIMA	Law	1,826/2023
SÃO PAULO	Decree	67,799/2023
SERGIPE	Decree	689/2024
SERGIPE	Decree	663/2024
TOCANTINS	Decree	6,757/2024