

# Business models in the public domain: the public governance canvas

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## Abstract

This study aims to put forward a public governance ontology, based on robust business literature and a structured public governance concept, to aid in improving understanding, communication, innovation, and measurements in public ventures. The ontology approach is combined with design science to develop a “public governance canvas model,” which conveys different descriptions of governance arrangements of given public ventures. The product of this research is a model that forms the ideal structure of new strategic management and information tools, as well as offers other benefits relating to measurement and evaluation. Finally, the canvas model is applied in three different institutional contexts of public management. Further development of this review could be accomplished by applying this model to organizations that generate important outcomes for both practitioners and academics.

**Keywords:** Business Models. Public Governance. Design Science. Innovation. Public Ventures.

## Modelos de negócio na esfera pública: o modelo canvas de governança pública

### Resumo

O objetivo deste estudo é apresentar uma ontologia de governança pública, baseada em robusta literatura em modelos de negócios e em um conceito de governança pública estruturado, a fim de melhorar a compreensão, comunicação, inovação e mensuração nas iniciativas públicas. A abordagem ontológica é combinada com a ciência de design para desenvolver um «modelo de tela (canvas) de governança pública», que se propõe a descrever mecanismos de governança em determinada iniciativa pública. O resultado é um modelo que deve formar de maneira ideal a base para novas ferramentas de gestão da estratégia e de informação, bem como oferecer outros benefícios em termos de mensuração e avaliação. Por fim, o modelo canvas é aplicado em três diferentes contextos institucionais da gestão pública. O futuro desenvolvimento deste estudo pode trazer importantes resultados tanto para profissionais quanto acadêmicos.

**Palavras-chave:** Modelos de negócios. Governança Pública. Ciência de Design. Inovação. Iniciativas Públicas.

## Modelos de negocio en la esfera pública: el modelo Canvas de Gobernanza Pública

### Resumen

El objetivo de este estudio es proponer una ontología de la gobernanza pública, basada en una sólida literatura sobre modelos de negocio y en un concepto estructurado de gobernanza pública, con el fin de mejorar la comprensión, la comunicación, la innovación y la medición de las iniciativas públicas. El enfoque ontológico se combina con la ciencia de diseño para desarrollar un “modelo de canvas de gobernanza pública”, que se propone describir los mecanismos de gobernanza de una dada iniciativa pública. El producto de esta investigación es un modelo que, idealmente, debe servir de base para nuevas herramientas de gestión de la estrategia y de la información, además de ofrecer otros beneficios en lo referente a medición y evaluación. Por último, el modelo de canvas se aplica en tres contextos institucionales de la gestión pública. El desarrollo futuro de este estudio puede proporcionar resultados importantes tanto para profesionales como para académicos.

**Palabras clave:** Modelos de negocio. Gobernanza Pública. Ciencia de diseño. Innovación. Iniciativas públicas.

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## INTRODUCTION

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Business model patterns (commonly referred to as templates or canvases) have emerged to meet the needs of professionals in the field of information technology (IT), so that these professionals may better understand the business and associated organizations, and develop more consistent and market-oriented IT solutions (CHESBROUGH and ROSENBLOOM, 2002). Management literature scholars quickly realized that this approach could serve other purposes, such as cultivating a more comprehensive and integrated understanding of business and its logical parts (CASADESUS-MASANELL and RICART, 2010; ZOTT, AMIT and MASSA, 2010); strengthen, improve, or even replace strategic planning (ABRAHAM, 2013; SHAFER, SMITH and LINDER, 2005); and provide a simpler description of the purpose of preparing a business plan. In short, it could provide a tool for improved understanding, mapping, and sharing of the logic of value creation in organizations or networks of organizations (AMIT and ZOTT, 2001; OSTERWALDER, 2004). More specifically, this would be achieved in a context of increasing complexity in which business models require the coordination of many stakeholders through the integration of businesses, processes, information systems, distribution channels, and people.

A good example of such a tool is the “business model canvas” (OSTERWALDER, 2004), which helps managers view the overall process of value capture, creation, and delivery carried out by the business’ various elements and stakeholders. In the field of public governance, there existed a similar initiative in the form of results-oriented management models, involving emerging issues such as quality and organizational capacities (BARNARD, 1971; BURNS, 1978; MINTZBERG, 1973; PRAHALAD and HAMEL, 1990), networks and network governance (AGRANOFF, 2007; CASTELLS, 2013), improved performance (BOUCKAERT and HALLIGAN, 2008; BOYNE, MEIER, O’TOOLE et al., 2006; HALACHMI and BOUCKAERT, 1996; NEELY, 2007), and public value creation (MOORE, 1994, 1995).

In the present paper, we link business models, design science, and public governance concepts, focusing on an area that remains to be discussed: the specification and conceptualization of a public governance model. We advance a “public governance canvas model” to describe governance arrangements of a given public venture<sup>1</sup> (government, policy, program, project, process, etc., aimed at addressing public problems), drawing from the literature on business models, public governance, and design science. Based on this foundation, other aims are pursued, such as the identification and modeling of indicators, improvement of decision making, strengthening of strategic planning, support in the design of IT solutions, improvement of communication with stakeholders, and, most importantly, increasing the innovation capacity of an organization’s staff and managers to growth achievements. The components of the proposed model and how they relate are based on elements of the public governance concept. This proposal (as a meta-model) allows for the creation of specific public governance models that, based on fourteen elements divided into four blocks, describe the operative rationale of any public venture, providing insights and assessing the feasibility of its implementation.

The first three sections of this paper present the business model topic concepts and developments, as well as the incentive for understanding and applying it. The fourth section conveys additional insight on public governance. The modeling and proposed approach for the public governance canvas are presented in the fifth section, where its key aspects are also discussed. The final section presents some closing thoughts on the matters discussed.

## DEFINITION AND BENEFITS OF BUSINESS MODELS

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Use of the term “business model” became popular in the literature during the development of IT and the Internet in the 1990s (AFUAH and TUCCI, 2001; PATELI and GIAGLIS, 2003), alongside the expansion of information and communications technology (ICT)-based organizations. It has no formal definition (MORRIS, SCHINDEHUTTE and ALLEN, 2005; ZOTT, AMIT, and MASSA, 2010), but it is generally accepted as a model within a business environment (related to a private organization). A “model” is a smaller-scale representation of something (an object, a physical or human phenomenon, etc.) or a mathematical description, both of which facilitate the study of the subject. Osterwalder (2004) defines the “business” as the activities related to the supply of products (goods or services).

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<sup>1</sup> “Program-and organization-like ventures”, in line with Barzelay’s proposition that “the role of venture is to refer to the concept of that which is managed, conceived comprehensively” (BARZELAY, 2016).

Therefore, the goal of creating a business model is to help understand, describe, or predict how organizations function to supply products and obtain sustainable financial returns. The notion of “product supply” is too restrictive, so it is extended to be understood, at a higher level of abstraction, as how a private organization obtains its income (pecuniary return) by supplying products (what is offered in return) to those who purchase those products, and how and with whom it generates these products. Thus, to create a business model means identifying the concepts and tools required to assist managers in specifying their organization’s logic; how it works and how to create value for its stakeholders (CASADESUS-MASANELL and RICART, 2010; ZOTT and AMIT, 2008).

Timmers (1998) was among the first to attempt to define the business model. He understood it as an architecture of the flows of products and information, including a description of various business stakeholders (such as customers) and their roles, as well as a description of revenue sources. Linder and Cantrell (2000), in turn, defined business models as the logical core of how organizations create value. Chesbrough and Rosenbloom (2002) perceived an alignment between technology and business, understanding the business model as an intermediary link between the development of IT solutions and value creation by a company. Shafer, Smith and Linder (2005) related the business model concept to that of strategy; a representation of organizational logic and strategic choices designed to create and capture value within a value network. Amit and Zott (2001) proposed a complementary, network-centered approach, describing a business model as the configuration of the content, structure, and governance of organizational transactions aimed at identifying business opportunities for value creation. They observed that transactions are active throughout multiple facets of organizations, including supply, partnerships, and customers.

Osterwalder (2004) reviewed the most important authors’ contributions on business models and found that much of the existing research is conceptual, broad, and sometimes vague. In summation, he proposed the following definition:

A business model is a conceptual tool that contains a set of elements and their relationships and allows expressing a company’s logic of earning money. It is a description of the value a company offers to one or several segments of customers and the architecture of the firm and its network of partners for creating, marketing, and delivering this value and relationship capital, in order to generate profitable and sustainable revenue streams (OSTERWALDER, 2004, p. 15).

In his analysis, Osterwalder (2004) focused on a then not well covered area: the conceptualization and specification of a generic archetype of business models. This approach is essential not only for establishing a fundamental understanding of management characteristics, but also for providing effective modeling tools to improve management practice in an increasingly uncertain, dynamic, and complex organizational environment (HORNEY, PASMORE and O’SHEA, 2010). Modern research regards business models as relatively novel, yet their emergent relevance and key positioning in management are revealed during instability. Many tools have been designed to aid managers in comprehending, analyzing, and changing their organization’s logic.

The following benefits of the business model approach are organized into five functions by Osterwalder (2004). They are based on a proposed business model ontology that will be presented in the next section: visualization, understanding, and communication; analysis, measurement, and comparison; design, planning, change management, and alignment; decision making; and prospective.

## **BUSINESS MODEL ONTOLOGY AND DESIGN**

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Osterwalder (2004) designed and proposed a conceptual framework, or ontology, for business models. The word “ontology” here is borrowed from philosophy to be applied to organizational systems, and describes (or defining specifications) concepts and relationships in the field of knowledge (GRUBER, 1993; O’LEARY, 2001). Giaretta and Guarino (1995) defined it as a discipline that handles reality. It is therefore different from epistemology, which addresses the origins of knowledge.

In the ICT field, ontology was initially used in knowledge representation and knowledge engineering. Currently, it is relevant to information systems (qualitative modeling, database design, agent design-based systems, object-oriented analysis), medicine, biological information systems, mechanical engineering, organization and standardization of knowledge, and management and organizational integration (GUARINO, 1998; O’LEARY, 2001; OSTERWALDER, 2004). Uschold and Gruninger (1996) provide an example of ontology as the specification of a database containing a hierarchical description of type, classes and their relationships in subsections, relational database schemas (relationships that may exist within a database), and integrity

constraints that must be identified. They further claim that the main reason for applying ontologies in ICT is to develop and implement a formal/explicit account regarding a common understanding in a particular area to solve a problem.

The present study relates ontology to organizational models, which, according to Fox and Grüninger (1997), aim to be an exposition of the processes, projects, people, resources, information, structure, strategy, and limitations of an organization or government. In summation, ontology is a reference model — with “reference” being understood as an authority (DUCE and HOPGOOD, 1990) — that provides a common understanding of a knowledge field (OSTERWALDER and PIGNEUR, 2004). Furthermore, the term ontology can be used to define semantics and syntax for a field (GUARINO, 1998). This matches our business model ontology perfectly, since it aims to define the concepts and relationships within an organizational system.

The format of a business model ontology is different than a structure/framework. A framework is based on a theoretical contribution drawn from the understanding of the reasons (the “whys”) for a given organizational phenomenon (WHETTEN, 1989), in search of a theory to help distinguish patterns, elements, and their operation. Ontology, alternatively, builds a problem–solution (finding and resolution) approach (OSTERWALDER, 2004). Therefore, ontologies capture and formalize business logic to design and build a representation of the organization’s business.

To this end, the ontology approach is combined with design science<sup>2</sup>. Au (2001) defined the latter as predominantly applied research intended to address practical problems; developing products that generate people-centric solutions (different than social sciences, which seek to figure out reality). In this sense, one can understand the activities of design science as taking place in two stages: research activities (comprising building, evaluation, theorizing on and justifying elements/components/devices) and research outputs (covering constructs, models, methods, and instantiations) (AU, 2001).

Thus, from our prospective, business model ontology has its roots in business model design, covers research activities (particularly building and evaluation), and produces research outputs (mainly constructs, models, and methods). Osterwalder (2004) proposed a generic ontology of a business model (containing, e.g., an artifact/tool or template) that can conceptually express the business logic of a private organization in a structured way. It is worth noting, however, that the studies of business models analyzed did not model the entire organization. Research in this area, which provides the basis for the current study, focused on the business model; the logic behind how an organization works and produces results (in the case of the private sector, how it obtains sustainable returns/profit), but did not describe the company entirely. The chief objective for Osterwalder (2004) was to describe new strategy management tools relating to the modeling of information systems. He proposed a simple tool that describes a “business model canvas” (OSTERWALDER and PIGNEUR, 2010).

## FROM THE COMPONENTS TO THE BUSINESS MODEL CANVAS

In designing ontological modeling for business models, it is important to build tools that support business planning and structuring, to help managers understand and describe the organization’s business logic. The function of the business model is to describe the logic of value creation, delivery, and capture by a private organization. It is a supporting tool for implementing strategy (OSTERWALDER and PIGNEUR, 2010) in alignment with the business structure, people, processes, and information systems. Based on robust research (literature reviews, interviews with experts, analysis of real experiences), Osterwalder (2004) determined that the best way to describe a business model is to identify elements that demonstrate how an organization creates value. He used a set of business components, also known as the “elements”, “building blocks,” “functions”, or “attributes” of business models. This was the first step toward the creation of a business planning and modeling tool that helps managers understand and describe their organization’s value production logic.

To build a business model ontology, Osterwalder (2004) first identified four areas, based on the balanced scorecard approach (KAPLAN and NORTON, 1996; MARKIDES, 2000) that emphasized the four pillars of a business model:

- *Products* — the core business of an organization are its products and the value offered to the market;
- *Interface with the customer* — who the customers are, how the products (goods or services) are to be provided, and how the customer relationships can be strengthened;

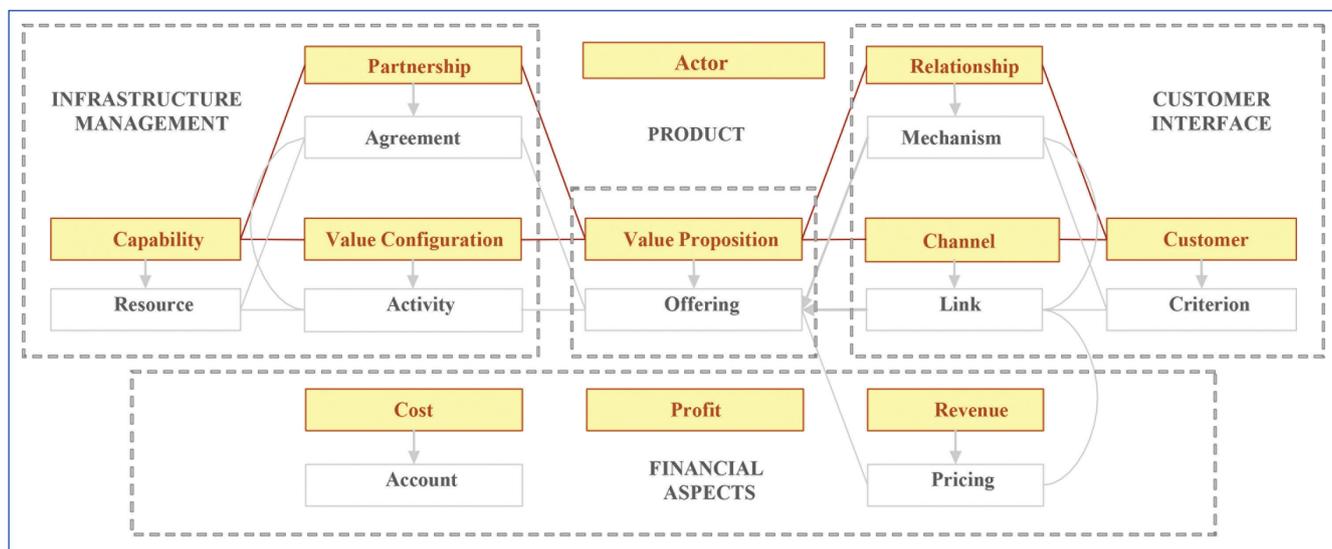
<sup>2</sup> In line with Herbert Simon’s (1996, p. 111) ideas. Simon considered design as a meta-discipline for all professions, a “science of the artificial”.

- *Infrastructure* — how the organization is structured efficiently to carry out its internal processes, its logistics, and how it relates with partners in a network;
- *Finance* — how the organization obtains financial returns, its cost structure and business sustainability analysis.

Then, he unfolded these four pillars into nine interconnected elements that show a business model ontology. The four pillars are a categorization and the nine elements are the ontology’s core. Figure 1 outlines the business model ontology, and how the specific elements within it relate to each other.

Figure 1

Business model ontology

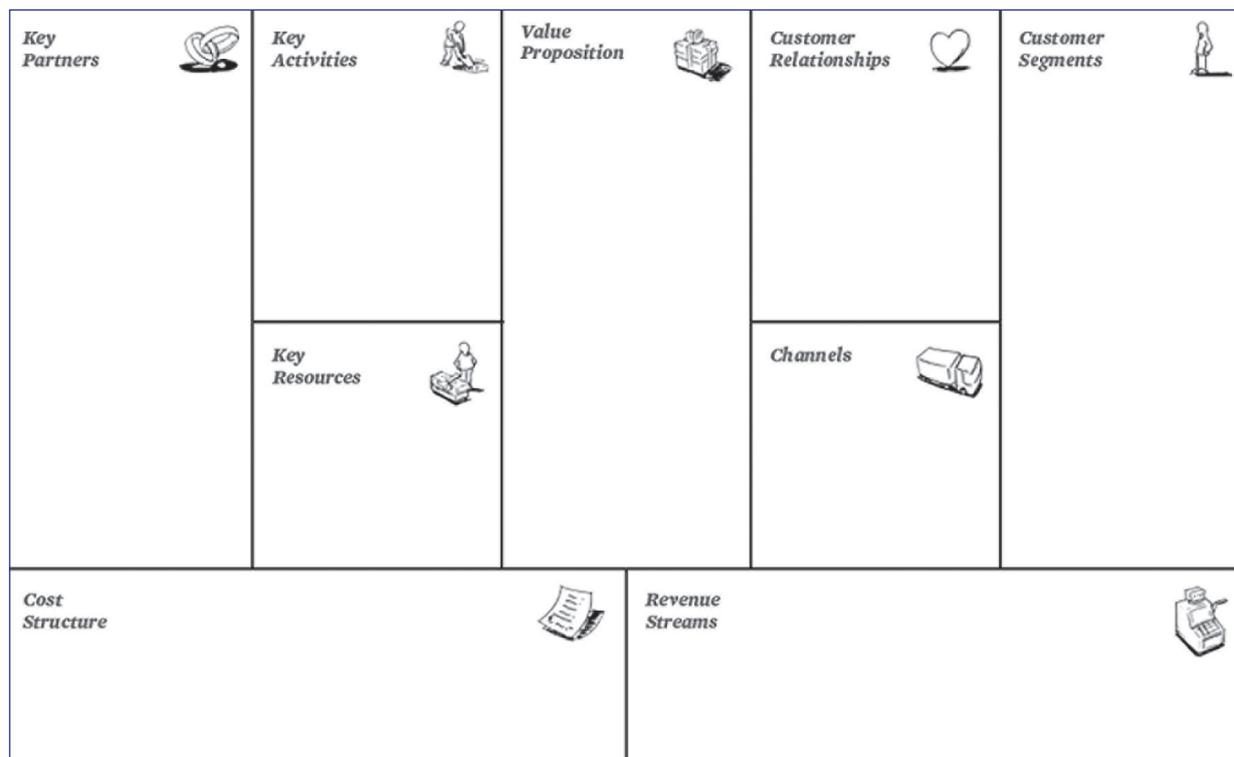


Source: Osterwalder (2004).

To turn these concepts and elements/components into a practical tool, Osterwalder and Pigneur (2010) incorporated them into a business model canvas, in which an overview of the functioning of an organization can be obtained by relating the elements in the framework (canvas). This gives the manager and his/her staff (and partners) the same view, while speaking the same language (without, however, being reductionist or trying to underplay the complexity that exists in an organization). It is worth noting that the elements proposed by Osterwalder and Pigneur (2010) are not new themes. Their largest advantage is their ability to synthesize the operating logic of a private organization into a single page, providing a holistic vision of the business.

Figure 2 illustrates the business model canvas framework. The canvas method was designed to allow the ideation, identification, and description of potential elements that are or should be part of an organization’s business model. The framework facilitates a holistic understanding of the business, since it shows an integrated view of the business, its supply of goods or services (value proposition), activities, relationships, customers, partners, distribution channels, resources, and finances (costs and revenues).

**Figure 2**  
**Business model canvas**



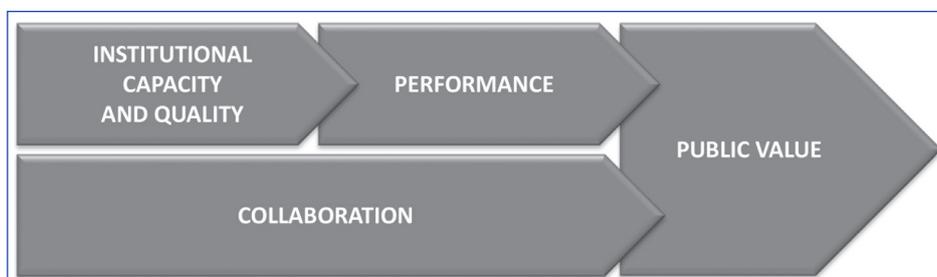
Source: Osterwalder and Pigneur (2010).

## INCORPORATING PUBLIC GOVERNANCE ELEMENTS

Public governance has become a “magic concept” (POLLITT and HUPE, 2009); attractive, with strong, positive connotations, and encompassing a new rhetoric that describes innovations in governing (KOOIMAN, 1993). It is based on a more comprehensive and integrated view of government — “whole of government” (CHRISTENSEN and LÆGREID, 2011; LÆGREID and VERHOEST, 2010; POLLITT, 2003) — and society (KOOIMAN, 2003). Osborne (2010) suggests Public Governance is a novel paradigm that develops new ingredients not present in the orthodox bureaucratic administration or in the new public management while Aguilar (2006) argues that Public Governance is made of multi-paradigmatic elements. Regardless being a new or a collage of elements pertaining to previous paradigms, Bevir (2009) defines governance as a process of governing — a convenient treatment for the purposes of this paper, too, which addresses the representation of public ventures as processes.

Along these lines, Martins (2011) represent the governance process based on four elements of a governance chain, illustrated in Figure 3.

**Figure 3**  
**Governance chain**



Source: Martins (2011).

Seen from this perspective, public governance is a process of generating public value from certain institutional capacities and qualities; collaboration between public and private agents in the co-production of services, policies, and public goods; and performance improvement. Moreover, these four dimensions overlap.

Regarding *institutional capacities and qualities*, governance is equivalent to government capacities (FUKUYAMA, 2013; GRINDLE, 1997; HOLLINGSWORTH, SCHMITTER and STREECK, 1993). It is related to leadership (BARNARD, 1971; BURNS, 1978; LASSWELL, 1966; MINTZBERG, 1980), strengthening of internal competencies (PRAHALAD and HAMEL, 1990), readiness to act (KAUFMAN, OAKLEY-BROWNE, WATKINS et al., 2003), and institutional design (AGUILAR, 2011).

*Collaboration* between public and private agents in the co-production of services is the domain of collaborative governance in multi-institutional networks (AGRANOFF, 2007; KOLIBA, MEEK and ZIA, 2011; AGRANOFF and MCGUIRE, 2003; SANTOS, 2012; HALACHMI, PETERS and VERHOEST, 2010; GOLDSMITH and EGGERS, 2004) and interactively with the network society (CASTELLS, 2010a, 2010b, 2011, 2013).

*Performance*, in turn, comprises the set of efforts towards achieving outcomes, involving dimensions such as economicity, execution, and excellence (related to efforts) and efficiency, efficacy, and effectiveness (related to results) (BOUCKAERT and HALLIGAN, 2008; BOYNE, MEIER, O'TOOLE et al., 2006; HALACHMI and BOUCKAERT, 1996; NEELY, 2007).

*Public value* is the key element of the governance process, representing the value that citizens attribute to services and policies received from government — a kind of return on taxes paid (MOORE, 1995). But public value can also refer to civic and republican values, satisfaction and quality perceptions (what the public values and consequently would give something in return for), value-added surplus through innovation processes, assets or intangible heritage represented by public institutions, and results of public policies formulated on the basis of refined preferences (MOORE and BENINGTON, 2011).

From a pragmatic and transformational perspective, governance is a process that can and should be optimized. A public venture representation model should therefore not only incorporate the elements of the governance process (institutional qualities and capacities, collaboration and relationships, performance, and public value), but also provide, based on a faithful representation, the development of more sustainable processes of governance improvement.

## ONTOLOGY AND THE PUBLIC GOVERNANCE CANVAS MODEL

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The literature on public governance, reviewed in the previous section, represents the importance of a contemporary field which has skyrocketed in the past decade. However, as most research on the public governance model remains at a broadly conceptual level, sometimes superficial and featuring gaps, the current text attempts to identify the details of and define a model to describe a public governance ontology. To this end, we have drawn on both business models and public governance concepts to build our reference model, and thus present it as (a) a new way of understanding public interventions, with multiple benefits; (b) a platform for identifying weaknesses in governance systems and indicating possible causes and solutions; and (c) a structure/canvas within which public organizations can be modeled, compared, and be redesigned.

A central question of any study regarding public governance models is if simple (graphic) tools exist to aid in explaining the “what” and “how” of an organization’s “business” (the logic of generating products, whether goods or services and tangible or, as is common in the public sector, intangible), and how its strategy is structured and executed. Furthermore, where are (or what are, if any exist) the instruments that allow managers to comprehend, measure, or even represent organizational dynamics? Most public executives or managers intuitively understand how their organization works and creates public value. However, public managers can hardly communicate it in an effective manner. Furthermore, one cannot deliberate over a governance topic (or public policy) if it is not clearly comprehended by the group of people involved. Later, it is important to develop a tool that allows public management practitioners to comprehend what their governance model is and its crucial components. This tool should also make sense of the model to other stakeholders, in turn, allowing it to be altered for key opportunities regarding generating more public value.

March and Smith (2005) argued that to design a framework (canvas) means, primarily, to seek out the basic elements/components of a governance model and then build the ontology that expresses the relationships among them. Just as the business canvas focuses mainly on the structural aspects of a business, the aim of the present study is to formalize public

ventures in a public governance canvas model. We present a semi-formal ontology for public governance models, conforming with the guidelines of Uschold, King, Moralee et al. (1998) for providing an ontology:

- Coding — establish the identity of crucial concepts and relationships in the field of interest and provide unequivocal and mutually exclusive text delimitations of the elements;
- Evaluation — test the ontology's internal and external consistency against the literature on results-oriented governance;
- Documentation — recording and specification of the designed ontology.

Drawing from the business model and public governance definitions previously mentioned, governance ontology for the public sector may be defined looking at the public governance canvas, a conceptual tool that features a set of elements and their relationships and thereby enables the expression of logic of value creation, delivery, and appropriation in a governance environment. In other words, it is the description of a venture's value offered to one or more segments of beneficiaries, and the detailing of the information flow, the governance architecture, and its network of stakeholders. This produces sustainable transformation and public value.

As previously stated, the ultimate objective of our research was to provide an ontology that allows a public venture to be described accurately. Therefore, the first step was to identify in the literature on business models and public governance the main domains, aspects, elements/components, and functions that constitute a venture. However, the different approaches to and descriptions of the components of a business model varied in rigor and depth. Certain authors proposed an explained conceptualization, while others merely mentioned the basic elements. Nonetheless, before proceeding to our study's detailed public governance ontology, blocks of the model were identified, based on a synthesis of existing literature on the topic, as follows:

- *Stakeholder network* — the relationship between beneficiaries, suppliers, partners, employees, and other stakeholders;
- *Value creation foundations* — costs, installed capacity, cost structure, and revenues;
- *Value creation flow* — processes, procedures, and distribution logistics;
- *Delivery/value appropriation flow* — products, impact, and public value generated.

Tables 1a and 1b present a list of the blocks and elements of the public governance model, and the relationship with the elements, mentioned in the literature. The aim of the current text is to propose a public governance model that both integrates and advances existing research by conceptualizing each element individually and then integrating them into a comprehensive vision. The tables summarize the contributions of the authors on public governance and business models, who contributed to the model proposed in the current study. The first two columns list the primary identified components of the public governance model; subsequent columns present the author(s) and year(s) of their contribution, and denote whether they contributed to the specification (and composition) of the public governance model.

**Table 1a**  
**Public governance ontology — comparative literature review**

Block / Component		Porter Creech Hamel (1985) (1994) (2000)			Amit and Zott (2001)	Chesbrough and Rosenbloom (2002)	Dubosson-Torbay, Osterwalder, and Pigneur (2002)	Hedman and Kaling (2002)	Neely, Adams, and Kennerley (2002)	Osterwalder (2004)	Kaplan and Norton (2004)	Lambert (2006)	Totals
Stakeholder network	Suppliers		X		X			X	X	X		X	6
	Partner			X	X				X	X	X	X	6
	Collaborators		X		X				X		X	X	5
	Other stakeholders			X	X				X		X	X	5
	Beneficiaries		X	X	X	X	X	X	X	X	X	X	0
	Relationships			X	X	X		X	X	X	X	X	8
Foundations for value creation	Revenues	X								X	X		3
	Costs					X				X	X		3
	Resources (input)	X				X	X			X	X		5
	Capacities	X	X	X			X		X	X	X		7
Value creation flow	Activities	X	X	X	X	X		X	X	X	X	X	10
	Distribution	X						X		X		X	5
Delivery/ value appropriation flow	Products (outputs)		X	X		X	X	X		X	X		7
	Impacts (outcomes)					X							1
	Value			X		X			X	X	X		5
<b>Totals</b>	<b>15</b>	<b>4</b>	<b>6</b>	<b>9</b>	<b>7</b>	<b>8</b>	<b>3</b>	<b>7</b>	<b>9</b>	<b>12</b>	<b>2</b>	<b>8</b>	

Source: Elaborated by the authors.

Note: An “X” signifies that the author(s) contributed to the specification and composition of our public governance model.

**Table 1b**  
**Public governance ontology — comparative literature review**

Block / Component		Lehmann-Ortega and Schoettl (2005)	Morris, Schindehutte and Allen (2005)	Shafer, Smith and Linder (2005)	Voelpel, Leibold, Tekie et al. (2005)	Chesbrough (2007)	Aziz, Fitzsimmons and Douglas (2008)	Casadesus-Masanell and Ricart (2010)	Kujala, Artto, Aaltonen and Turkulainen (2010)	Teece (2010)	Wikström, Artto, Kujala and Söderlund (2010)	Totals
Stakeholder network	Suppliers					X	X	X	X		X	5
	Partner					X	X	X	X		X	5
	Collaborators								X		X	2
	Other stakeholders					X	X	X	X		X	5
	Beneficiaries		X	X	X		X	X	X	X	X	8
	Relationships			X	X	X	X	X	X	X	X	8
	Revenues											0
	Costs											0
Foundations for value creation	Resources (input)					X					X	2
	Capacities		X				X	X		X		4
Value creation flow	Activities					X					X	2
	Distribution		X									1
Delivery/value appropriation flow	Products (outputs)		X	X	X	X			X		X	6
	Impacts (outcomes)			X	X	X			X		X	5
	Value	X		X	X	X	X		X	X	X	8
<i>Totals</i>	<i>15</i>	<i>1</i>	<i>4</i>	<i>5</i>	<i>5</i>	<i>9</i>	<i>7</i>	<i>6</i>	<i>9</i>	<i>4</i>	<i>11</i>	

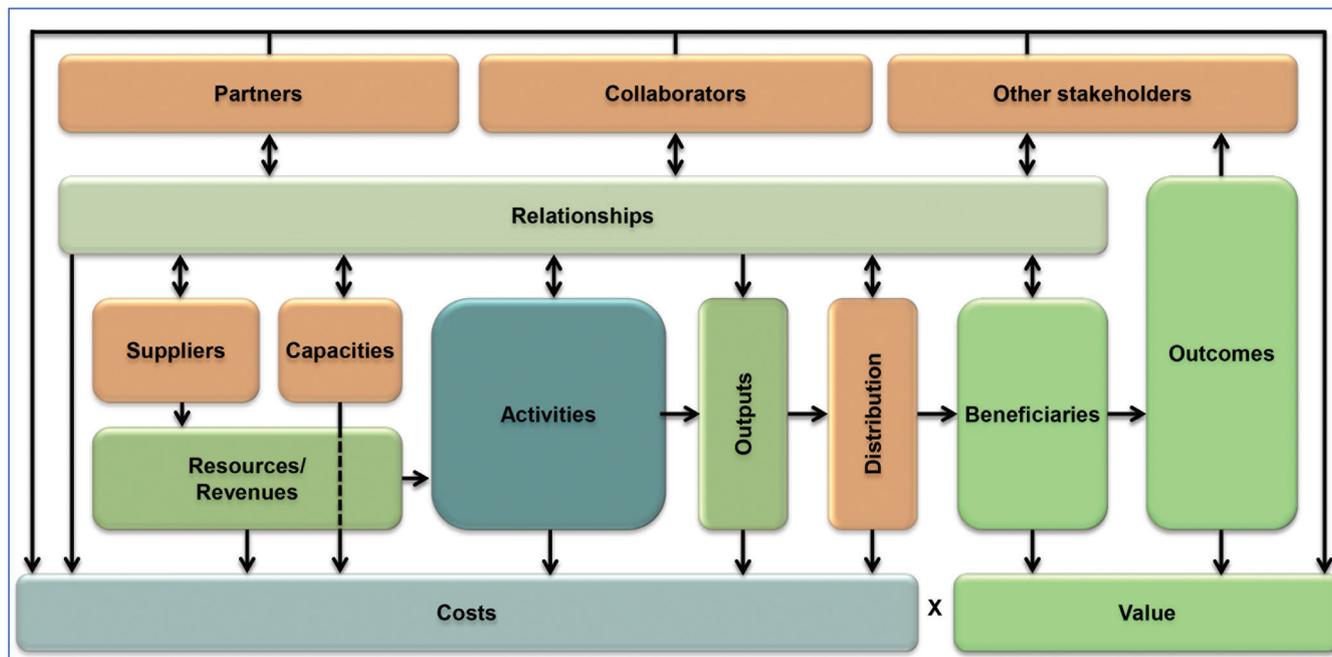
Source: Elaborated by the authors.

Note: An “X” signifies that the author(s) contributed to the specification and composition of our public governance model.

The elements presented in Tables 1a and 1b are a synthesis of our public governance, results-oriented management, and business model literature reviews. Concepts and tools were designed that assist managers in comprehending, analyzing, communicating, and improving the logic of their organization’s governance model. The product of this study is a public governance model ontology that should ideally form the basis for new strategy management and information tools, as well as offering other benefits in terms of measurement and evaluation.

A simple tool prototype for facilitating the creation or representation of specific public governance models is provided in Figure 4. Box 1 presents a description of the components of our public governance canvas model, as well as the primary questions guiding the model’s application to develop and improve organizations.

Figure 4  
Public governance canvas



Source: Elaborated by the authors.

Box 1

Public governance canvas model — components and key considerations

Block / Component	Description	Questions guiding the development process
Stakeholder network	Suppliers	Describes the agreements and contracts for necessary supplies, as well as the stakeholders involved in each supply agreement <ul style="list-style-type: none"> <li>Who are the strategic suppliers?</li> </ul>
	Partner	Describes the network of (formal) cooperation agreements that seeks higher value delivery <ul style="list-style-type: none"> <li>Who are the key partners? What kind of resources should be obtained from these strategic partners? What kind of processes/projects do these partners implement?</li> </ul>
	Collaborators	Describes the staff and functions/positions required by the governance model <ul style="list-style-type: none"> <li>What kind of collaborators are required? What kind of processes/projects do these employees perform?</li> </ul>
	Other stakeholders	Describes other potential partnerships required (also considering informal relationships) or other stakeholders affected by the intervention <ul style="list-style-type: none"> <li>What other stakeholders are important to enhance the value proposal? What other stakeholders are more likely to collaborate with or threaten the intervention?</li> </ul>
	Beneficiaries	Describes the segment(s) of beneficiaries (target audience) of the governance model <ul style="list-style-type: none"> <li>For whom is the organization producing value? What are the characteristics of the target audience(s) of public policies? Who are the most important beneficiaries?</li> </ul>
	Relationships	Describes routines/protocols adopted among stakeholders, how contact is maintained among the stakeholders, and what type of relationship is established with each stakeholder (supplier, partner, collaborator, beneficiaries) <ul style="list-style-type: none"> <li>What kind of relationship can each stakeholder group expect? How is this relationship integrated with the governance model? What are the positive and negative incentives adopted in each relationship?</li> </ul>

Continue

Block / Component		Description	Questions guiding the development process
Foundations for value creation	Revenues	Specifies which former and current sources exist/ have been found to obtain revenue and ensure the sustainability of the governance model. Describes what funding sources are available, the budget, and the financial structure of the governance model required to deliver the proposed value.	<ul style="list-style-type: none"> <li>• What are the main sources of funds? Are these sources sufficient to cover the value proposal?</li> </ul>
	Costs	Describes the cost structure and the means involved in the operation of the model	<ul style="list-style-type: none"> <li>• What are the most important cost items inherent to the governance model? What are its financial values? What cost items can become unpredictable?</li> </ul>
	Resources (input)	Describes the necessary resources to deliver value to the beneficiaries, whether physical facilities or financial resources	<ul style="list-style-type: none"> <li>• What resources are important to achieve the value proposal? What are the most expensive resources? Can a disruption in the supply of key resources be resolved?</li> </ul>
	Capacities	Related to institutional skills (intraorganizational) and individual skills (knowledge, skills, etc.) for useful execution focused on creating value for the beneficiary. Aims to create unique performance, based on efforts that are undertaken to produce results.	<ul style="list-style-type: none"> <li>• What are the essential institutional skills (intraorganizational)? What are the main skills of the individuals who make up the governance model?</li> </ul>
Value creation flow	Activities	Describes how activities are organized in the governance model structured by initiatives— whether processes, projects, or events—needed to generate value for the beneficiary	<ul style="list-style-type: none"> <li>• What processes/projects are important for the value proposal (consider relationships, implementation, etc.)? What is the most valuable and most expensive process/project?</li> </ul>
	Distribution	Describes the means (channels) and the form (instrument) that the governance model uses to deliver goods and services to its beneficiaries, how it maintains contact with its beneficiary (direct or indirect)	<ul style="list-style-type: none"> <li>• Which channels do the organization's beneficiary segments prefer to be used? How (instrument) are these channels integrated? Which channels are most cost effective?</li> </ul>
Delivery/value appropriation flow	Products (outputs)	Describes an overview of the set of goods and/or services delivered to the public policy recipients	<ul style="list-style-type: none"> <li>• What set of goods and/or services are delivered to each beneficiary segment? What beneficiary problems are being addressed?</li> </ul>
	Outcomes	Describes the network of direct and indirect outcomes produced in the external environment (external to society and/or citizens) through the delivery of goods and/or services	<ul style="list-style-type: none"> <li>• What are the main expected impacts (direct and indirect)?</li> </ul>
	Value	Describes the value appropriated by the beneficiaries enabling the fulfillment of their expectations, values, demands, and interests, which are key to generating trust	<ul style="list-style-type: none"> <li>• What kind of public value is delivered to the beneficiary? Which needs, expectations, values, demands, and interests are being met? What is the cost/benefit/value in the organization's governance model? What is the share of contribution of each revenue source to the expected public value?</li> </ul>

Source: Elaborated by the authors.

Some experiments were carried out based on this conceptual proposal. It is worth highlighting three important adoptions of the canvas in different contexts with different purposes. The cases explored were: Government of the State of Rio Grande do Norte; Union Military Justice and National Fund for Educational Development (FNDE).

The Government of the State of Rio Grande do Norte used the canvas to support the definition of the contents of the State Strategic Agenda for the time horizon until 2035. The canvas subsidized the proposition of a Mission and Vision, unfolded

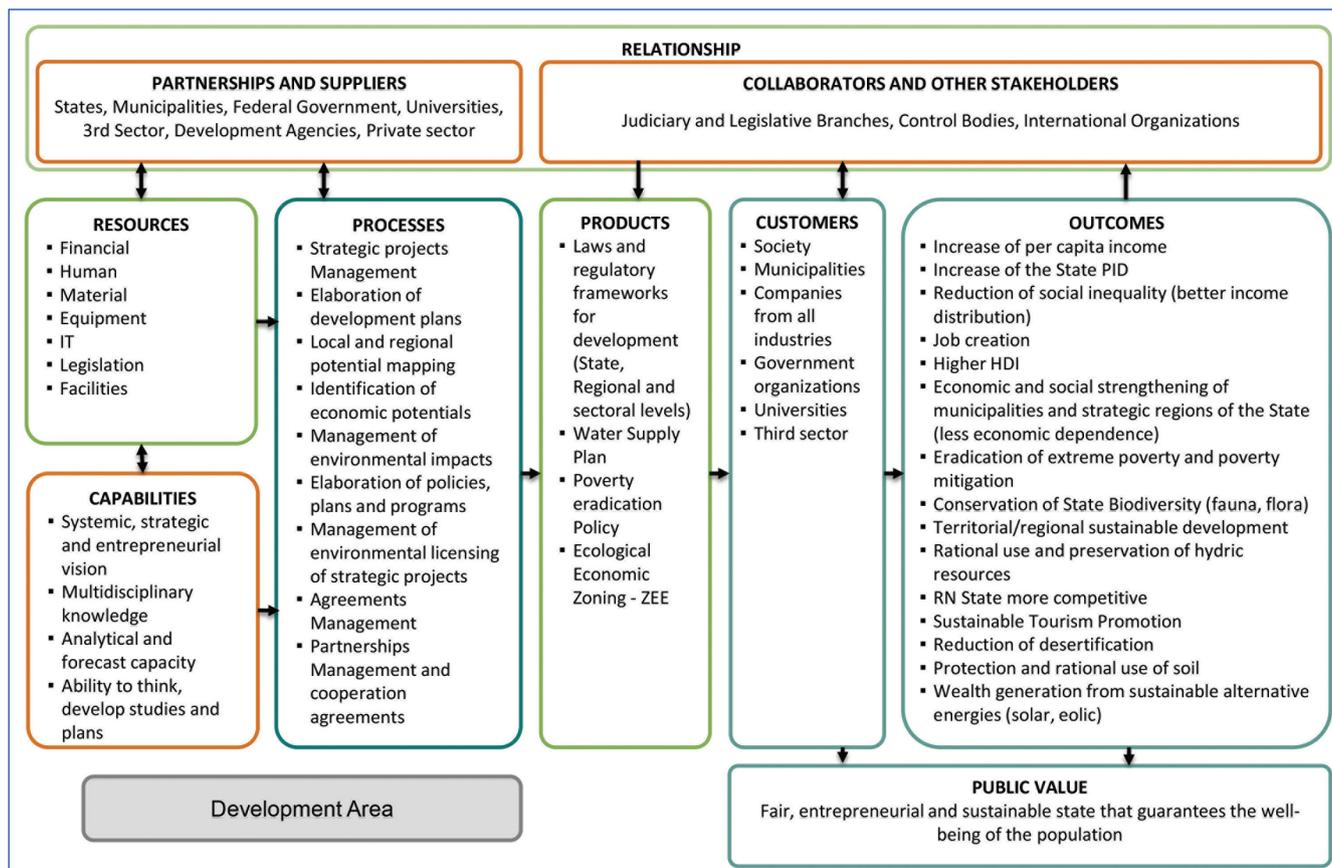
in a Map of Strategy established from the modeling of four results areas: sustainable development, infrastructure, services network and public governance. The conceptual tool of governance canvas supports the modeling of each of the results areas that expresses the logic of creation, delivery and value appropriation in a governance environment. Thus, for each of the results areas, the products and respective customers, impacts and value proposition were identified, as well as the processes, resources, capacities and stakeholders involved. Based on canvas elaborations in the technical workshops environment, the State Strategic Map was formulated, which, in turn, was deployed in objectives, indicators, targets and projects.

The Union Military Justice (headed by the Superior Military Court) sought to strengthen the strategic alignment of the institution and its deployment to the tactical level. It drafted the governance canvas grounded reflections, debates and refinements on the alignment between the strategic level and the tactical level. To verify the consistency of strategic alignment, the proposed methodology involved the analysis of cause and effect relationships among the canvas elements. This process required the involvement of representatives from various organizational units. It was found that the objectives of each perspective were related to each other, so that it was possible to develop / create a history of execution of the strategy, based on the raised hypotheses. The checks of cause and effect relationships brought consistency to strategy, grounding the scope of vision.

Finally, FNDE is a federal agency (under the Ministry of Education) responsible for implementing educational programs countrywide. FNDE's used governance canvas to design key performance indicators for strategic, tactical and operational levels, as well as an analytical model adopted during the periodic and integrated meetings on monitoring and evaluation institutional performance. The canvas, besides favoring the understanding of the organization and the relationship with the linked units, also creates key indicators that represent better performance from the perspective of several actors and work fronts. This comprehensive and multidimensional tool has helped managers to better understand, map and share the logic of the governance model of the organization according to previously defined strategic themes. Figures 5, 6 and 7 below contain canvas illustrations of the three experiments cited.

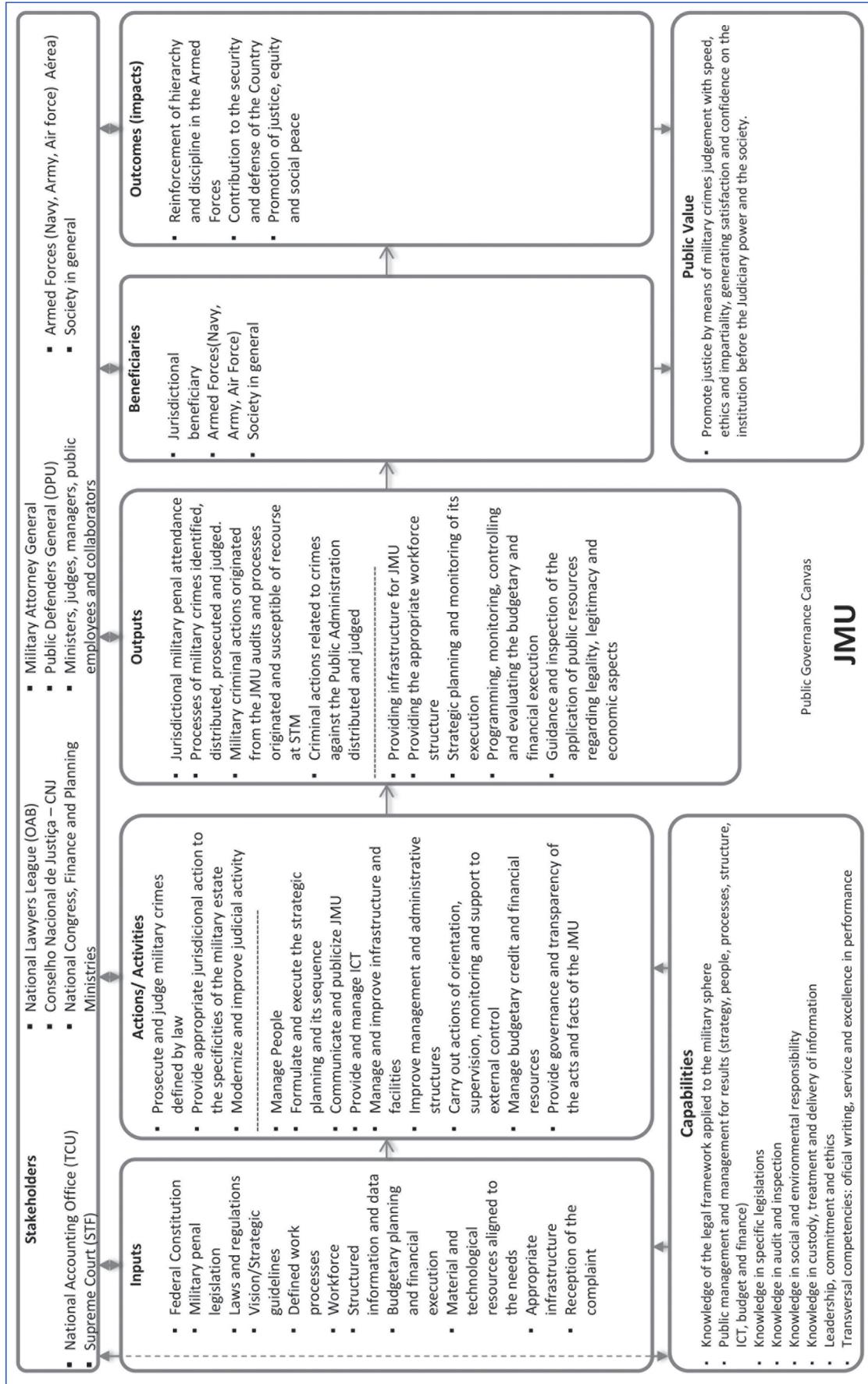
Figure 5

Governance canvas Rio Grande do Norte (development area)



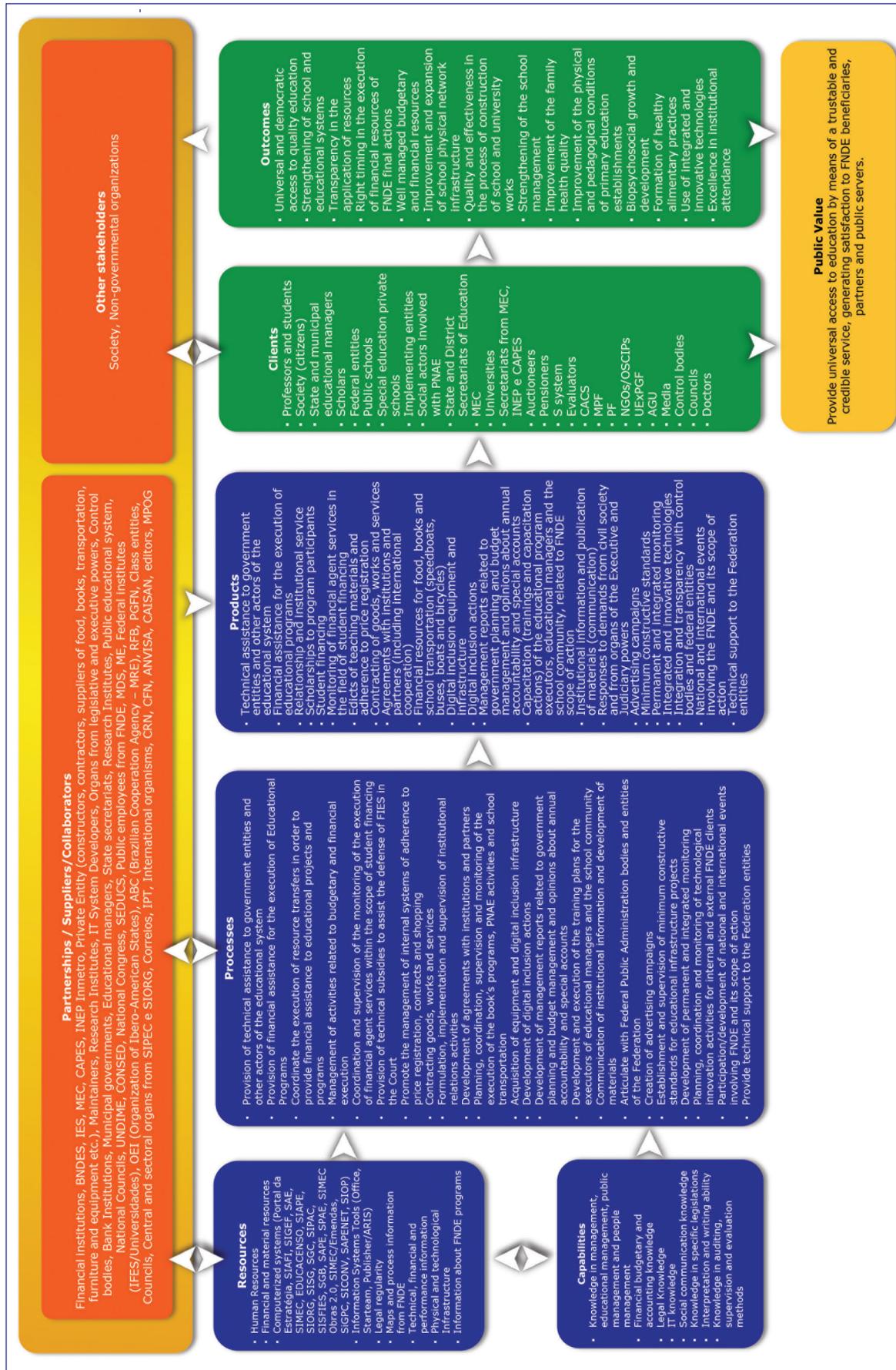
Source: Nogueira, Marini, Vilhena et al. (2016).

Figure 6  
Governance canvas JMU



Source: Mingorance, Rodrigues, Souza et al. (2016).

Figure 7  
Governance canvas FNDE



Source: Alencar, Torres, Costa et al. (2015).

## CLOSING REMARKS

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As detailed in this paper, our study's goal was to establish a public governance ontology based on literature on business models and a structured public governance concept to improve understanding, communication, innovation, and measurement in public interventions. Although their goals may appear similar, the domain and content of an ontology adopted by private companies is substantially different from that for a public governance ontology that is used in the public sector — or, in consideration of circumstances not restricted to governments, related to addressing public issues.

The concept of the business model has expanded beyond its early origins in ICT to become a management tool supporting organizations that create and deliver value to their beneficiaries through products (goods and services) in a sustainable manner. Concurrently, the domain of public governance has been strengthened through the solutions to complex public problems and the focus on creating value for public policy recipients. The union of these areas along with the science of design provided a basis for the creation of a new public governance canvas model that allows for the redesign of organizational management models. This enables progress in the process of innovation and effectiveness gains. Our study has sought to contribute to the public governance debate by proposing techniques, as well as a canvas model, for the public sector to develop specific governance arrangements, and innovate in contemporary public management.

Considering that the development of canvas models is still a new and emerging issue in organizations — and directly associated with the creation of organizational knowledge — any new organizational analytical model will require complementary studies, just as new approaches in the field of public governance models should present their limitations and allow the opening of spaces for improvement.

Looking ahead to future research on this topic, we suggest the application of this review of models and approaches in field studies, with the purpose of verifying the elements raised in this article and their interrelationship with the dynamics in organizations and public interventions. This general analysis could, above all, contemplate the main relations, similarities and divergences between the elements of construction of the canvas, presenting the contributions of the tool for the construction of the public governance model.

Furthermore, although this study contemplates the application of governance models in three experiments, additional research on evaluation and validation of the governance model ontology should be conducted. New experiments may lead to a revision or regrouping of the elements in order to improve the model proposed and its performance. New studies may also be focused on the implementation procedures of the model, describing its steps and best implementation practices.

In short, the contribution that this article seeks to bring is to encourage researchers and executives to deepen their studies and applications of new approaches to complex contexts. The innovation of a governance model is a starting point toward transforming the logic of proposing, delivering, and appropriating public value. Moreover, generating innovative governance models/arrangements represents a source of sustainable development production, given that it can result in the creation of value networks and changes in management, providing a framework for the emergence of new, successful experiences in management for results. The research presented here should be further developed through the application of this model in organizations, while the underpinning subject matter should be considered a wide-ranging topic worthy of future investigation, with important outcomes for both practitioners and academics.

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