From Electronic Government to Digital Governance: Transformation Governance Models and Strategies

Do Governo Eletrónico à Governança Digital:
Modelos e Estratégias de Governo Transformacional   *(PT: 93-117)*

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ABSTRACT

This article analyses Transformation Governance (t-Gov) models and strategies, seeking to contribute to the clarification of this concept. Using a literature review on the topic, the text discusses what is understood by Digital Transformation of the government in the context of the conceptual enlargement of the e-government for digital governance. The results show t-Gov as an adaptive model consisting of strategies that seek to create institutional conditions to enable a Digital Transformation process focused on users. The article concludes that

citizen involvement and co-creation are the main elements of such strategies, and the aim of the t-Gov is to create contextualized mechanisms of digital governance to enable such elements.

Keywords: Transformation Governance, Electronic Government, Digital Governance, Citizen Co-creation

RESUMO

Este texto analisa modelos e estratégias de Governo Transformacional (t-Gov), procurando contribuir para a clarificação deste conceito. Recorrendo a uma revisão da literatura sobre o tema, o texto discute o que se entende por Transformação Digital do governo no quadro do alargamento conceptual do governo eletrónico para a governança digital. Os resultados evidenciam o t-Gov como um modelo adaptativo constituído por estratégias que procuram criar condições institucionais para habilitar um processo de Transformação Digital centrado nos usuários. O texto conclui que o envolvimento dos cidadãos e a cocriação são os elementos principais de tais estratégias, sendo que o objetivo do t-Gov é criar mecanismos contextualizados de governança digital que os possibilitem.

Palavras-chave: Governo Transformacional, Governo Eletrónico, Governança Digital, Cocriação Cidadã

1. Introduction

During the 2000's, the concept of "Transformational Government" (*Transformational Government*/*t-Government*/t-Gov) has emerged in the political and academic lexicon in order to refer to an advanced stage of electronic government (*e-Government*/e-Gov) characterized by radical reorganization of the public sector (Parisopolous, Tambouris & Tarabanis, 2009; 2014; Omara, Weerakkodya & Daowdb, 2020). However, the essence of e-Gov's development has always concerned the transformation of the internal and external processes of the government, using Information and Communication Technologies (ICT) to provide more efficient services and policies more for citizens (Bannister & Connoly, 2011; Van Veenstra, Klievink & Janssen, 2011; Curtis, 2019). Without this transformation of the governmental internal structures and of the user relationships/interactions (of citizens and companies), the digitalization of the government is reduced to the mere informatization of some public services, without a any transformation (Janowski, 2015).

The literature introduces this issue as a "restricted version" (e-Gov 1.0) vs. the "extended version" (e-Gov 2.0 and 3.0) of the electronic government (Martins & Ramos, 2008), or as "electronic government" vs. "digital government" (OCDE, 2004; Dunleavy, Margetts, Bastow & Tinkler, 2005; Janowski 2015; Erkut, 2020). In the digital/extended version, the transformative potential of ICT usage by the government results from the multiple allowable possibilities of interaction

(Omara, Weerakkodya & Daowdb, 2020). However, the enablement of this potential implies operating a set of organizational and cultural changes that extend the governmental ability to democratize public power and user involvement (Savoldelli, Codagnone & Misuraca, 2014). In practice, this path has been followed through the development of contextualized mechanisms of electronic governance (*e-Governance*) that seeks to place citizens and other stakeholders at the center of the operation and the governance of the State (Janowski, 2015).

In this context, the t-Gov seems to have emerged as enabling model of digital/extended version of the e-Gov. However, the literature is unclear on differences between the concepts and to what extent it is not about replication (Omara, Weerakkodya & Daowdb, 2020). In addition, there is no consensus on what Digital Transformation of the government means (Curtis, 2019), since the concept of electronic government acquires different meanings if issued in a governmental or public management frameworks (Palvia & Sharma, 2007). This brings us to the following starting questions:

1. What does Digital Transformation of the government mean/imply?

2. How does t-Gov differ from e-Gov?

3. Which model of "transformational governance" of the State is included in this concept?

Thus, by means of a revision of the literature on this subject, this article approaches the concept of t-Gov and analyses the models and strategies for its perfomance, seeking to clarify what is government transformation through the ICT, what are the differences between this concept and the e-Gov concept as its predecessor, and what is the "transformation governance" model implicit in such differences.

This article is divided in three parts. The concepts of government and electronic government are presented in the first part, seeking to identify the spaces/forms of interaction between the government and citizens allowable by the ICT, and their models of evolution. The second part focuses on the concept of t-Gov, discussing what transformation of government through the use of ICT means/implies, as well as the existing strategies to perform such transformation. Finally, the "governance of transformation" is discussed, stressing out the importance of citizen involvement and co-creation within the framework of a new model of operation and governance of the State under construction.

2. Digital Government: Development Concept(s) and Models

The use of ICT in the public sector dates back to the 60's/70's of the previous century. However, the term "electronic government" only acquired its notoriety in the middle of the mid-1990s with the boom of the Internet, firstly as a context of sharing of governmental experiences/practices, and then as a field of study (Grönland & Horanm, 2004). Up until then, the use of technology in the government was summarized to the automation of pre-existing locally departmental processes, without any perception of its potential as a reform and modernization model of the State (Yildiz, 2007, Sá-Soares, 2009). This situation changed in 1993, when the US government stressed out the role that the Information Society and, specifically, the ICT usage in the reform of the public sector, might play the important role in the renewal of American society (Sá-Soares, 2009).

Several countries followed the same example afterward and, around the turn of the millennium, the design and implementation of e-Gov policies and strategies gained global attention (Grönlund & Horanm, 2004; Sá-Soares, 2009). Since then, the rise of new internet-based technologies has influenced internal changes in public institutions, enhancing their interaction and collaboration with other public and private institutions and with citizens (Vlahovic & Veracic, 2015).

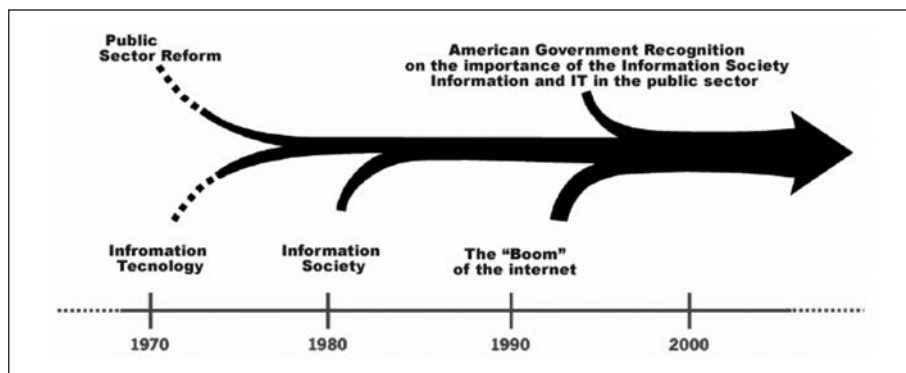**FIGURE 1.** Precondition for the emergence of Electronic Government
Source: Sá-Soares (2009, p. 21).

2.1 Evolution of Technology and Models of Electronic Government

Although e-Government is being an integral part of State governance models, the progress in this field can be much easily related to technological development, in particular, to the World Wide Web. This can be proven by the maturity models

proposed in the literature, as will be provided below (Table 2), and by the correspondence between technological tendencies and models of e-Government, such as web 2.0 vs. e-Gov 2.0; open government vs. open data; semantic web vs. semantic e-Gov (Barcevičius, et al., 2019).

Tim Berners-Lee, that proposed the World Wide Web in the decade of 1980, describes the evolution of this technology in three stages of innovation (Framework 1.): the "Web of documents" (Web 1.0); the "Web of people" (Web 2.0); and the "Web of data" (Web 3.0) (Anderson, 2007, pp. 195-198). Each of these technological breakthroughs has been influencing a paradigm shift in the use of ICT in public administration.

TABLE 1. Development of technology and of the e-Gov

WEB 1.0 > E-GOV 1.0	WEB 2.0 > E-GOV 2.0	WEB 3.0 > E-GOV 3.0
Government-oriented	Citizen-oriented	Individual Services
Restricted Interactivity	Interactive	Collaborative
Services restricted in time and space	Mobile Services	Integrates services, accessible anywhere and anytime
Offer-based Information	Participation-based Services	Smart Services
Content-publishing Organizations	Content-publishing Individuals	Individuals and Organizations interacting and publishing/creating content.
Hypertext webpages	Service portals with technologies associated to Blogs, Wikis, RSS feeds, podcasts and social networks.	Integrated multi-service platforms based on Semantic Web, AI, Blockchain.

Source: Author's elaboration.

e-Gov 1.0, based on Web 1.0 technology, is characterized by the provision of statistical information on institutional home pages regarding services provided, as well as means and forms of the public attendance. With the emergence of new technologies, e-Gov 1.0 evolved afterwards into more interactive forms, through mechanisms, which allowed to provide elementary information and services, such as information search, e-mail, filling out forms, requesting documents and receiving tax bills, among others (Vlahovic & Veracic, 2015).

Subsequently, the development of a set of social media networks which characterize the Web 2.0 enabled the interactive and decentralized creation of content,

allowing the Government to be a part of the construction and use of collective intelligence on the Web. Thus, e-Gov 2.0 focused on the use of the Internet to promote transparency, accountability, communication, collaboration and involvement of citizens in public services and policies (Sivarajah, Urani & Weerakkody, 2015).

Nowadays, the emergence of disruptively potential technologies is influencing a new generation of e-Gov. Semantic web, data mining, Blockchain, Internet of Things (IoT), Artificial Intelligence (AI) and Bots are examples of new technologies that permeate the discussions around Web 3.0. Nowadays, government's plan to use these technologies in order to provide smart services, to formulate informed public policies, to explore resources of the society and to generate public value in a collaborative manner (Loukis, Charalabidis & Flak, 2019). In the meantime, a new generation of technological innovation based on the symbiosis between human beings and machines is already being discussed due to the progresses made in the fields of neuroscience, robotics and nanotechnology. Web 4.0 is now moving towards the development of an ultra-smart, symbiotic and ubiquitous network and it is still understanding its impacts on e-Gov (Choudhury, 2014; Barcevičius et al., 2019).

2.2 Electronic Government vs. Electronic Governance

e-Gov is generally used to refer to the use of ICT to improve efficiency in the public sector, as providing services to citizens, as welll as the democratic process (Grönlund & Horanm, 2004). Yet, the differences between these approaches generate multiple designations, such as "digital government", "electronic administration", "on-line government", "electronic governance", "digital governance", among others, sometimes used equivalently and some other times distinctively (Sá-Soares, 2009). One of the most relevant discussion carried out to understand this polysemy puts itself among concepts of electronic government and governance (Palvia & Sharma, 2007; Martins & Ramos, 2008; Bannister & Connolly, 2012; Erkut, 2020).

Generally, in literature the terms "government" and "governance" have different meanings (Rhodes, 1996). The term "government" is used to appoint formal institutions of the State, whose mission is to preserve public order and direct class actions (Stoker, 1998). In this context, while "governance" concerns the execution of governmental action limited by public realm, the concept of "governance" has been used to frame more comprehensive realities, involving new networks of institutional relationship, more or less formalized, between the State, the private sector and civil society (Pierre & Peters, 2000).

In the same sense, according to several authors, "electronic governance", or "digital governance" is a distinct and wider concept of e-Gov, referring to the

manner in which technology, and particularly, the Internet, is transforming the state governance process by easing interactions between the government, citizens and business companies (UN-ASPA, 2002; Martins & Ramos, 2008; Erkut, 2020). Other authors, however, have a different understanding of the issue. Palvia and Sharma (2007), for example, refer that e-Gov focuses on stakeholders outside an organization, whether governmental or different public agency, while "electronic governance" emphasizes administration and management within an organization, whether public or private, referring to the internal use of ICT for horizontal or multilevel management of organizational resources and administration of their policies and procedures.

Thus, whilst some authors conceive these concepts in line with the distinction of their "conventional" versions and, therefore, with the discussion on reformulation of the traditional model of the State, other prefer to assume a narrower view of governance, closest to an administrative/managing and collaborative perspective. It is clear that e-Gov is not just a matter of technological progress, but of the possibilities of interaction provided, whatever point of view one represents.

2.3 State Space Transformation

The extension of the use of ICT in governmental activities of the State can be divided into the following interactive categories (Yildiz, 2007): G2G (Government to Government: internal relationships in public administration); G2C (Government to Citizens: external relationships that involve citizen interaction – e-Democracy); and G2B and its inverse (Government to Business: external relationships that comprises interaction with business companies). In addition to these, some authors still mention the G2E (Government to Employee) interactions, stressing out that e-Gov implementation and operation imply flexibility, autonomy, training and qualification of State agents (Palvia & Sharma, 2007; Bilhim & Neves, 2007).

Within this framework, the context and form in which these interactions take place enclose "spaces of intervention to transform State operation" (Sá-Soares, 2009, p. 26), enables the identification of three principles, namely:

a) Electronic services (e-Services) – which encompass the "provision of electronic information", referring to the online availability of relevant information and content regarding the operation of the government (promoting transparency and accountability); and the "provision of electronic services", associated to the creation and provision of online services to ease the manner in which the G2C and G2B interactions are processed;

b) Electronic administration (e-Administration) – which comprises intra and inter-institutional reforms for inter-operability (compatibility/coexistence) and integration (unification) of information and processes on electronic business activity (G2G and G2E). It also covers the use of ICT to support, restructure and innovate the manner in which activities associated to political operability are conducted, namely, to support decision making process with more accurate and trustworthy information/data;

c) Electronic democracy (e-Democracy) – which involves the use of ICT to promote citizen participation, empowerment and communication with the elected representatives in the public policy process (e-Participation & e-Empowerment); and as an instrument, easing the democratic process, for example, through the online voting (e-Voting).

TABLE 2. The e-Gov concept in the Governance Triangle

INTERACTIONS	> SOCIETY >> POLITICS >> ADMINISTRATION >		
	G2C AND G2B	G2C	G2G AND G2E
Scope	External		Internal
Space Transformation	e-Services	e-Democracy	e-Administration
ICT using forms	Electronic information provision Electronic service provision	e-Participation e-Empowerment e-Voting	Inter-operability and integration of information and electronic business processes
Main Pressures	Service Improvement Citizen-centered services	More informed and demanding society Political legitimacy Accountability	Debureaucratization Eficiency/Cost reduction Transparency

Source: Author's elaboration.

On the basis of these "transformation spaces", we are able to think about new model of operation and governance of the State, as well as ICT potential in this process.

2.4 Maturity Stage: From Electronic to Digital Government

As government digitalization has progressed, it has become common practice to analyze the evolution of e-Gov according to levels/stages of its development or maturity/sophistication. There are several models/scales, which are generally quite similar to each other, ranging from a simple online presence and information provision, the online interactions and transactions, and, finally, the integration of the government and citizen-centered services (see Layne & Lee, 2001; UN-ASPA, 2002).

A synthesis of these models was presented by Siau & Long (2005), emphasizing technological, cultural and political breakthroughs necessary for the evolution of e-Gov towards digital government (Table 3). According to these authors, the most difficult breakthrough was from transactional to transformational level, revealing the complexity of the information/automation (restricted version) flow to the effective transformation of the State apparatus (extended version).

TABLE 3. e-Gov Maturity Meta-Models

LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5
Web Presence	Interaction	Transaction	Transformation	e-Democracy
Technological Breakthrough		Organizational and Cultural Breakthrough	Political Breakthrough	
Automation of existing services		Public Administration / Government Transformation		
Restricted Version/Electronic Government		Extended Version/Digital Governance		
>+ TIME >>+ COMPLEXITY >>+ INTEGRATION >				
>+ COSTS >>+ BENEFITS >				

Source: adapted from Siau & Long (2005).

There are many blockages to such transformation (Manda & Backhouse, 2016). The accumulated experiences demonstrate that the ICT tend to be superimposed to the existing organizational structures and processes, without making any fundamental changes (Bannister & Connoly, 2011; Al-khouri, 2011; Luna-Reyes & Gil-Garcia, 2014). Within this framework, one of the main impediments to the Digital Transformation of the government has been the prioritization of the re-de-

sign of the front office instead of the reorganization of the back office[1]. Without the re-engineering of the back office, the long-term impact of the efforts to transform the government functions becomes marginal (Van Veenstra, Janssen & Klievink, 2011). For this reason, in response to these issues, new e-Gov practices started to include t-Gov.

3. Transformational Government: What is it? What it is for?

In the literature, t-Gov is defined as a "stage of evolution of electronic government characterized by the radical reorganization of the public sector" (Parisopoukos, Tambouris & Tarabanis, 2009, p. 462). However, during the discussion of the concept, there does not seem to be any consensus on what does "Digital Transformation" of the government mean (Bannister & Connolly, 2011; Curtis, 2019).

3.1 Change vs. Transformation...or Coevolution ?

For Van Veenstra, Klievink and Janssen (2011), for example, "transformation" implies the changeover to a new situation that is qualitatively different from the previous one. Yet, these authors recognize that it is very difficult to evaluate the innovation level of the public sector and the time required necessary for a change of situation to be considered complete.

Bannister and Connolly (2011) cite Scholl's (2005) notion on "morphostatis" (minor/incremental change) and "morphogenesis" (radical/disruptive change) used in biology and cybernetics to explain first-order and second-order changes. Despite the theoretical utility of this binary category, the authors warn that, in practice, the transformation of the government sets a continuum with no clear point of how something transitions from a minor change to a radical one.

Within this framework, other authors prefer to distinguish technological innovation (creative digital solutions) from institutional transformation (new values/regulations), while adopting a coevolutive perspective in which the development of both situations is mutually influenced (Luna-Reyes & Gil-Garcia, 2014).

A coevolution model (Table 4) proposed by Janowski (2015) is based on four stages: (1) Digitalization or "Technology in the Government" (no internal transformation of the government or external relationships with the stakeholders, and no dependency on application context); (2) Transformation or "Electronic Government" (internal transformation of the government, without transformation of the external relationship or dependency on application context); (3) Engagement or "Electronic Government" (internal transformation and transformation of the

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1. Internal operations of an organization that support core processes and that are not accessible or visible to the public in general.

government's external relationships, without dependency on application context); and (4) Contextualization or "Policy-oriented Electronic Governance" (transformation at all levels).

TABLE 4. Digital Government coevolution flow

STAGES		DIGITAL TECHNOLOGY	GOVERNMENT PRESSURES	INNOVATION	INSTITUTIONAL
	4. Contextualization	Mobile Platforms Ad hoc Networks Local big data, data mining Portable devices, apps	Responding to changing needs Self-governance support Fair environment assurance Custom service enablement Sector development stimulation	Mobile collaborative transport Digital preventive healthcare Compliance automation Digital social innovation Portable device policing	Agile Government DIY Government Regulatory Government Platform Governance Sectoral Digital Government
	3. Engagement	Social Network Semantic Web Linked open data Mashups Sensor Network	Reach out to citizens Citizen Voice Facilitation of citizen monitoring	Citizen consultation and idealization Crowdsourcing and co-delivery Public service volunteering Participatory budget Public and private partnerships Citizen scorecards Digital collaborative accountability	Mobile Government Citizen Sourcing Participative Governance Open Government
	2. Transformation	Cloud Computing Big data and analyze	Government reform Connected/integrated agencies Best service delivery Smart decision-making	Business process re-engineering Government information sharing Shared government services Organizational Interoperability Government Information Director Government knowledge management	Transformational Government Whole of Government Data-Smart Government
	1. Digitalization	Office Software Internet	Modernization Increased internal efficiency Increased access to information	Information Management Systems Government information portals Electronic public services Computer supported work Government office automation	Paperwork reduction Freedom of information

Source: adapted from Janowski (2015).

According to the author, the coevolution between these stages, can be explained through a flow transmission between i) pressures on the government; ii) digital technologies available; iii) how governments lead with the pressure while innovating and using such technologies; and iv) the possible innovation, which becomes institutionalized governmental practice.

This model thus stresses out a coevolution process, in addition to digitalization, as the internal changes of governmental operation are indispensable so that afterwards, the relationships of digital governance could provide more specific innovations/solutions (services, policies and regulations) adapted to the contexts (a country, city or sector) and to the needs of the citizens.

3.2 Labels for the Transformation of the Government

It is not possible to speak of Digital Transformation of the Government without referring to the changes in the public governance models that occur, primarily within the New Public Management (NPM) and, more recently, within Public Governance.

Seeking to surpass the limitations of burocratic organization, the management techniques inspired by the market logic introduced by the reforms resulting from the NPM, had particularly perverse effects. Particularly, these reforms led to disintegration and fragmentation of state structures and the emergence of a new constellation of competing public and private actors that multiplied and complexified the relationships of interdependency of the State (Dunleavy, Margetts, Bastow & Tinkler, 2005).

A new generation of reforms, initially labelled as Joined-up Government (JuG), and afterwards as Whole-of-Government (WoG), was the answer to these effects. The concept of JuG was introduced for the first time in 1997, in the United Kingdom, by the government of Tony Blair, and afterwards adopted by other countries of Anglo-Saxon influence, where the NPM reforms were more radical.

In contrast to a "departmentalized" organization and "silos", the JuG denoted the aspiration in order to achieve a greater horizontal and vertical integration and coordination. This aimed to elimination of duplicated policies, optimization of available resources, creation of synergies, which would unify different stakeholders in specific fields of intervention, and provision of an uninterrupted access to services for citizens (Christensen & Lægreid, 2007).

As in NGP, the concepts of JuG and WoGdo not represent a coherent set of ideas and tools, but a comprehensive approach that describes multiple responses to the fragmentation of the public sector and the need of increasing the government integration, coordination and capacity. These responses can comprise one or all levels of government and involve internal or external actors to the government,

targeted to a group, a location/territory or a sector of activities (Christensen & Lægreid, 2007).

In this context, program management the integrated provision of e-Services has become one of the greatest pressures for the adoption of horizontal coordination strategies. At the same time, the search for more holistic approaches which would increase the interoperability and integration has made collaborative governance a global trend (Dunleavy, Margetts, Bastow & Tinkler, 2005). Table 5 summarizes main characteristics of these concepts.

TABLE 5. Types of Interoperability and Integration

TYPE		DESCRIPTION
INTEROPERABILITY	**Technical**	Convergence/compatibility of communication, transportation, storage and representation standards of the information among different systems
	Semantic	Convergence/compatibility of information meaning from different origins
	Legal	Legal requirements and implications of providing information
	Organizational	Re-engineering (coordination and orientation) of organizational/business processes of interoperating entities for an integrated operation and provision of services
INTEGRATION	**Intra-institutional**	Interoperability of different systems existing within an institution to eliminate intra-institutional "silos"
	Horizontal inter-institutional	Interoperability between systems of two or more institutions within the same administrative level (national, regional or local)
	Vertical inter-institutional	Interoperability between systems of two or more institutions among different administrative levels
	International inter-institutional	Inter-operability between systems of institutions from different countries

Source: adapted from Sá-Soares (2009).

3.3 Transformational Government: Activation Models and Strategies

As in JuG, t-Gov was introduced by (second) Tony Blair's administration with the strategy entitled "Transformational government: enabled by technology" (Cabinet Office, 2005). As a successor of "local electronic government" (King & Cotterill, 2007), this strategy established a six-year period for "transforming public services by using ICT", aiming to creation of a base that would extend the ca-

pacity of the public sector for future transformations, focusing on three major areas: 1) user-centered services (G2C and G2B); 2) culture of shared services, in the front-office, in the back-office, in information and infrastructure (G2G); and 3) professionalism, in terms of planning, delivery, management, competency and governance of the changes enabled by ICT (G2E).

When Tony Blair's premiership ended in 2007, the "transformational" focus would only reappear in governmental initiative in 2013 with the program entitled "Digital Transformation", whose purpose was to "transform 25 main services in 400 days, making them digital by default, much simpler, clearer and quicker to use" (Gov.UK, s.d). Once more, it was focused in re-designing the digital services based on user needs and not on government needs (user-centered vs. government-centered design).

Currently, the United Kingdom is implementing the "Government Transformation Strategy 2017 to 2020", that assumes as a "plan to transform the relationship between citizens and the State". The strategy emphasizes: i) answering the needs of citizens' (providing "multiple access channels"); "personalized services"; colocalizing services and personnel); ii) re-designing the manner in which the government operates (from the front-end to the back-office; from organization to culture; WoG; digitally enabled public servants; making the government more efficient); iii) better use of data (transparency; shared platforms; open/free access; etc.); iv) security (data protection, privacy and cybernetic security); and v) new policies (to achieve transformation over the very long-run).

To fulfil this strategy, the British government has, since 2018, been working on a "transformational portfolio" that comprises more than 50 projects across all departments. Given its complexity, the practical "7 Lenses" maturity guide/matrix was developed, seeking to offer a common language and consistent structure to the personnel that manages these projects to activate transformation in the organizational context (Table 6).

Based on the United Kingdom's experiences, a similar Transformational Governance Model has been developed by OASIS (Organization for the Advancement of Structured Information Standards), the not-for-profit consortium that promotes open standards for the Global Information Society. OASIS (2014, p. 16) defines "t-Gov" as "a managed process of ICT-enabled change in the public sector, which puts the needs of citizens and business at the heart of the process and achieves significant and transformational impacts on the efficiency and effectiveness of government", deliberately avoiding the description of a "final stage" for the e-Gov. The idea is that as there is a difference between each context, within which each government is operating, as well as the organizational legacy and the im-

TABLE 6. The 7 Lenses for the Activation of Transformational Government

LENS 1 **Vision**	The vision gives clarity around the outcomes of the transformation and sets out the key themes of how the organization will operate.
LENS 2 **Design**	The design sets out how the different organizations and their component parts will be configured and integrated to deliver the vision.
LENS 3 **Plan**	The plan needs to retain sufficient flexibility to be adapted as the transformation progresses while providing confidence of delivery.
LENS 4 **Transformational Leaderships**	Delivering a transformation often means motivating into action a large network of people who are not under the direct management of the transformation leader.
LENS 5 **Collaboration**	Collaboration is key to transformation in a multidimensional environment that increasingly cuts across organizational boundaries.
LENS 6 **Accountability**	Having clear accountability for transformation within an organization enables productivity and improved decision making, and leads to better outcomes.
LENS 7 **People**	Transformation will require people in your organization to be engaged and to change their ways of working - you need to communicate effectively with them at every stage of the transformation.

Source: Gov.UK (s.d.).

plementation of technology from which transformation begins, t-Gov cannot be understood as a "one-size-fits-all" approach for future government development.

To reinforce this idea, OASIS presents four main differences between the t-Gov programs and the traditional e-Gov programs (Borras, 2012, p. 28): (1) adopt a WoG vision on the relationship between the public sector and its user; (2) include initiatives to e-enable the frontline of public services, rather than just seeking for transactional services that can be e-enabled on an end-to-end basis; (3) adopt a WoG vision on the most efficient way to manage the government's cost base; (4) focus less on users as passive recipients of services and more as co-creators of public services. Table 7 summarizes this change in focus between these approaches.

TABLE 7. Differences between e-Gov and t-Gov Programs

E-GOV	T-GOV
Government-centered	Citizen-centered
Supply push	Demand pull
Government as the only provider of services to citizens	Government as well as an organizer of multiple competitive sources of service to citizens
Non-connected vertical business Silos	A layer of virtual businesses, built on citizen needs, operating horizontally across departments
The "Identity" belongs to and is managed by the government	The "Identity" belongs to and is managed by the citizen
Public data not provided	Public data provided free of charge for the re-utilization purposes
Citizen as service recipient or consumer	Citizen as owner and co-creator of services
Online Services	Multichannel Service Integration
ICT as capital investment	ICT as a service
Led by Producers	Led by the Brand

Source: Borras (2012).

This model is based on six dimensions, very much in line with the "7 Transformational Lenses" adopted by the United Kingdom (Borras, 2012; OASIS, 2014): (1) transformational leadership (key people and necessary governance structures); (2) stakeholder engagement (collaborative governance model); (3) common terminology/reference model (strategic clarity/shared vision); (4) transformational business model (virtual business layer within the government, focused on user need); (5) policy products (output, documented to the transformation process among agencies); and (6) transformation delivery map (providing a four or five year review of how the program will be delivered/implemented, including properties and trade-offs among different elements).

3.4 User Centrality and Cocreation

The innovation of t-Gov in relation to e-Gov is, therefore, in the change of focus placing user needs in the center of government reorganization. In this context, Parisopoulos, Tambouris and Tarabanis (2009; 2014) digest nine defining elements of the t-Gov: (1) user-centric services; (2) United government (JuG/WoG); (3) increase in human capacity (HR); (4) change in the organization and attitude

of public servants; (5) single formality centers (one-stop government); (6) multi-channel service delivery; (7) flexibility; (8) valuing innovation; and (9) efficiency. These elements shape "Digital Transformation principles" which establish the basis for the evolution of the so-called "open services" and the "service co-creation".

The order in which these principles are activated is determinant so that, in the long term, such evolution enables a true transformation of the relationship between government and citizens (Scheme 1). Firstly, the design and delivery process of e-Services have to be aligned with the needs and behaviors of its users, and not with government requirements. This implies "coproduction", i.e., a change in the relationship between service users and service providers, in order to verify these needs and to ensure that these are met (King & Cotterill, 2007). In this regard, the citizen must also have an important role in service "co-creation", i.e., in the design, decision making and service evaluation. The use of ICT, in terms of access, accessibility, usability and flexibility is also important to enable this participation in public policies, ranging from the provision and information search to the shared or delegated power over certain decisions (King & Cotterill, 2007).

Second, the information/data on citizen needs/preferences must be gathered and analyzed, and results must be treated and shared openly for the purposes of transformation strategy and program development in order to cross-over the response (WoG) to such needs. This is where t-Gov programs come in. In order to this happen, one must share long-term vision, leadership and qualified personnel, change of values and attitudes, as well as the reorganization of the back-office and the development of collaborative governance between the stakeholders.
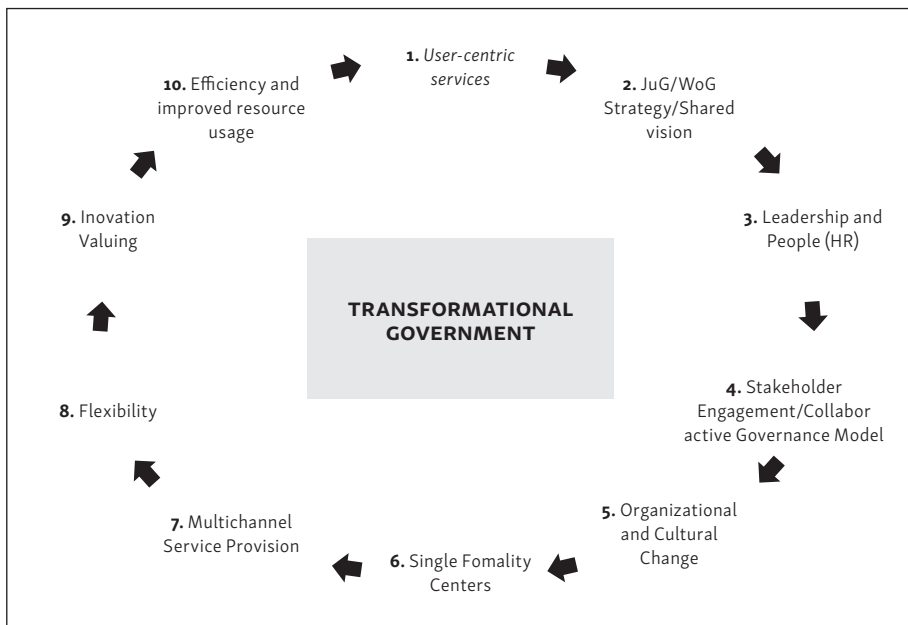
FIGURE 1. Transformation Government Models

Source: developed based on Parisopoulos, Tambouris & Tarabanis (2009) and Borras (2012).

Finally, the use of ICT for the multi-channel and combined service delivery becomes a standard and customization of services, while the flexibility is enhanced in the front-office to meet to individual needs. On the other hand, the design and delivery process, carried out in transparent and in co-created manner, stimulates innovation which must be actively incorporated. The streamlining of back-office processes for a more efficient resource and service provision, becomes a collaterality, instead of an objective.

3.5 Digital Governance and State Transformation

In the t-Gov framework, digital governance cannot be conceived as a product of new administrative/management practices (collaborative governance) offered to users in a finished form. The focus on citizen co-creation, as well as the expansion of relationships/interdependencies among internal and external stakeholders, means that governance configures, itself, sets a public asset, to be assessed against and developed by social processes, leading to constant transformations, either of spaces/processes of interaction between citizens and government, or of the values underlying these interactions. This means that digital governance refers not only

to the government operation, but also to the governance of the State, in its democratic conception.

One of the major political interests regarding e-Gov in the relationship between governance and e-Democracy is its ability in overturning lack of trust in the government increased by the NGP. The most common meaning of "trust" is the belief that the government promotes social justice and equity in the decision-making processes (Bannister & Connolly, 2011). In the context of a service-centered, managerial and user-centered culture, it is essential to ensure that equity and justice are not forfeited. Citizen involvement in decision making process is one of the ways to be considered by the government.

The government must pay attention to the fact that part of its power is in migrating from state actors to non-state actors, and from institutions established for collaborative networks. In addition to this, as individuals become more informed and demanding, digital governance has reduced public authority, negatively affecting the efficiency and efficacy of governments. New technologies, social networks and the interactions promoted, allow almost any individual to endow a power of influence that would not have been possible to achieve before. The case of "Wikileaks", in which a small non-state entity challenged the US government, portrays the asymmetry of the new paradigm and the erosion of its consequent confidence (Schwab, 2016).

Within this framework, e-Gov can do much more than providing greater transparency in activities/operation of the government. The idea is that the government has to play an active role in the democratization of public power and in the citizen involvement, through the gathering of collective preferences, mediated by digital governance mechanisms. In other words, dealing with extending access to the government, universally, beyond the common electronic services, reaching another qualitative sphere and, therefore, the transformation, not only of the spaces/interactions between citizens and decision-makers, but also of the values that regulate such relationships (Bertot, Estevez & Janowski, 2016).

3.6 Transformational Government: Incentives for Citizen Co-Creation

The discussion so far carried out on the issues raised at the beginning of this article has underlined the t-Gov as an adaptive model to e-enable the organizational and cultural conditions needed so that one can move on from an "electronic government" paradigm to "digital governance" paradigm (Omara, Weerakkodya & Daowdb, 2020). In this contexts, Digital Transformation of the government seems to not to imply a revolution but a gradual and programmed transition through the development of increasingly contextualized governance strategies and mechanisms that put citizens and other stakeholders in the center of the governmental

reorganization. The digital governance strategies to carry out such a reorganization are those that distinguish t-Gov from e-Gov and implying the following transition:

1. From user-centric administration to user-driven administration;
2. From reactive to proactive government concerning public policy establishment and service provision;
3. From information-centric government to data-driven public sector;
4. From the digitalization of existing processes to digital by design;
5. From a government service provider to a government as co-creation platform of public value; and
6. From access to information to open by default.

t-Gov is presented, therefore, as a model of "transformational government" in order to enable these six transformations, which include citizen involvement and co-creation as central elements to promote the innovation/resolution of problems (problem solving). The incentives for co-creation are provided, of course, by the change of orientation towards the user needs. At this level, t-Gov culture implies a more strategic approach in the use of open standards, free software, as well as digital design techniques based on wiki technologies and crowdsourcing methods, in order to increase citizen involvement in the service improvement and in the definition and implementation of public policies.

But the main problem for governments in meeting citizen needs has been prevailing in the knowledge on their preferences (Erkut, 2020). In this context, t-Gov strategies also involve the ITC usage to more accurately assess the motivations and expectations of targeted groups in order to improve their participation and more effectively attain heterogeneous interests. This strategy type is already becoming common, for exemple in initiatives/projects related to Smart Cities (Abadia, Dias & Seixas, 2019) and urban planning (Seixas, Baptista & Dias, 2020).

Transparency promotion regarding the specific role of citizens in co-creation terms (role transparency), as well as the manner in which the participatory process takes place (process transparency), and the results of such a process (outcome transparency), is also considered a central part of the t-Gov strategy to stimulate involvement and co-creation (Nambisan & Nambisan, 2013). Table 8 summarizes such strategies and mechanisms.

TABLE 8. t-Gov strategies and mechanism to encourage citizen co-creation

STRATEGY 1
APPROACH ADJUSTMENT TO THE INNOVATION CONTEXT

- ▫ Contests and competitions
- ▫ Workshops and brainstorming sessions
- ▫ Data collection
- ▫ Data access and virtual tools
- ▫ Dedicated communities

STRATEGY 2
CITIZEN EXPECTATION MANAGEMENT

- ▫ Nature, extension and involvement term
- ▫ Knowledge and skills that citizens need to take to the activities
- ▫ The actions that will result from the involvement/inputs
- ▫ The benefits that citizens (individually or collectively) will obtain from involvement

STRATEGY 3
LINKING THE INTERNAL TO THE EXTERNAL

- ▫ Creating dedicated personnel groups to connect external innovators with internal groups
- ▫ Creating new communication mechanisms to provide vision and direction to activities of innovation and co-creation of public value
- ▫ Adopting new structures and processes to better integrate user information and adapt to citizen involvement

STRATEGY 4
INCORPORATING CITIZEN INVOLVEMENT IN A BROADER CONTEXT OF MAIN GOALS AND OBJECTIVES OF GOVERNMENT AGENCY

- ▫ Extending the areas in which the ideas and contributions of the citizens can be considered and applied
- ▫ Helping citizens to observe their involvement as part of a broader movement (having greater social good goals and results)

Fonte: adapted from Nambisan e Nambisan (2013, pp. 41-45).

4. Conclusion

This article analyzed Transformational Government models and strategies, seeking to clarify what does Digital Transformation of the government mean, what are the differences between this concept and the concept of e-Gov, and what is the "governance of transformation" of the State which is highlighted in such differ-

ences. In doing so, the contribution of this article was to summarize a reference framework for researchers and professionals in this field of study.

The literature review showed that the conceptual extension of e-Gov for digital governance is influenced by technological development, but, especially, by the extension of spaces and forms of interaction between government and citizens. Such extension is reflected in different stages of maturity, ranging from a simple online presence of the government, electronic transactions to the interoperability/integration and transformation of the government. The transition from the transactional level towards transformation implies, however, profound organizational and cultural changes. The concept of t-Gov arises from new governmental practices in order to respond to this situation, seeking to create the institutional conditions to enable a user-centric transformation process and not a government-centric one.

It is interesting to note the role that the United Kingdom had played during Tony Blair's premiership (1997-2007) in generalization of labels like the JuG and t-Gov. Considering the experiences in this country, t-Gov does not seem to be a final stage/level of maturity of e-Gov, but more an approach for the governance of transformation processes of the public sector by using ICT, which mixes e-Gov with JuG/WoG view and collaborative strategies to re-design the structures and processes between public bodies and between these and the citizens.

Thus, the incremental changes needed for the creation of a technological basis that extends the spaces of interaction between government and users are referred to with regard to the first states of maturity of e-Gov, t-Gov presents a set of approaches for an organizational and relational/valuative change that allows to activate/program a future transformation for a new "State". Citizen involvement and co-creation is placed at the heart of these approaches. Instead of accumulating data internally and segmenting citizens, we see an idealized model of providers/decision makers and users sharing information and working together to achieve common goals.

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