

DIGITAL TRANSFORMATION IN THE NATIONAL FISHERIES DEVELOPMENT FUND

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ABSTRACT

Introduction: There is a knowledge gap for the user lay in digital transformation of the National Fisheries Development Fund, whose implementation will allow an adequate administration of resources, optimization of processes and operational simplification, generating efficiency in public management. At the same time, the availability of electronic media and the internet, facilitate access to the services offered by the institutions, achieving their effectiveness.

Purpose: To demonstrate the requirements and resources required to implement digital services in an institution and the benefits of a modern, efficient, inclusive and open state, examining how digital transformation is presented in recent empirical research.

Method: A qualitative investigative investigation was carried out through a bibliographic review in the SCOPUS database and current regulations.

Results: It is highlighted that the institutions and the National Fisheries Development Fund follow the state standards of digital governance, which dictate the implementation of digital platforms through their web portals. However, these are still not fully understood first, by the authorities who do not invest in their majority in the appropriate technology and due to the low technical knowledge of the citizen's use.

Conclusion: It is concluded that the gap in the implementation of online systems for process optimization, reduction of bureaucracy, accessibility to them and the internet for citizens without restrictions, generate efficiency in the delivery of resources and services. Contributing this research to the construction of research instruments and digital interventions that involve the use of information technologies for the purpose of improving public management and quality service to citizens.

KEYWORDS: Electronic medium. Digitization Modernization. Electronic government. Information technology. Online system. Public administration. Governance. Services. Public sector. Access to information. Open date.

1. INTRODUCTION

The use of digital services as part of the digital transformation promoted by the digital government secretary of the presidency of the council of ministers in Peru is *increasing* today and is here to stay. The benefits and disadvantages of digitization are widely discussed in articles and regulations. For its use by citizens (REJAME et al., 2020) (FROM ALBUQUERQUE; FROM ARAÚJO, 2021). In recent years, digital governance has been in full transition, seeking to achieve consolidate, having its largest Fortaleza in the relationship and benefit that the citizen will have. Digital services are perceived as a tool to optimize streamlining administrative processes, cutting down on bureaucracy. However, for its conception there is a usage gap of the same by the citizen, mostly from the most distant and poorest populations of our country. So the full role of the citizen is still a utopian issue (RODRIGUEZ, 2021). This reality requires a change, for this the leadership of the authorities must propose an inclusive and comprehensive vision generating commitment and interest in participation citizen in the solution of problem, using the technological tools of the electronic government. However, this is linked to the political interests of the authorities at all levels of government, given that the investment in technological infrastructure supported by the media in rural and urban areas is almost nil. Nowadays is essential and essential to have digital services and stable internet that allows strengthen public administration and at the same time bridging gaps of language and culture (VALENZUELA et al., 2020).

To understand completely the use of digital services as a strategic ally for the achievement of quality services by the citizen, is in the process of maturation, as well as their implementation. It requires going beyond the availability of platforms, unraveling the complexities that challenges involve and dilemmas for self-management of information (DE MORAIS; BEZERRA, 2021). Digital governance will allow public management to guarantee civil society its participation in it, making its processes known and speeding up the crystallization of the delivery of goods or services through the use of information technologies. (FRANCISKOVIC et al., 2020). another of the advantages and strengths in the implementation of the digital transformation in public institutions that is helping to mature the modernization of the state, is that they already have regulations (LEGISLATIVE DECREE No. 1412, 2018). Likewise, this law has a regulation,

which seeks to promote the integration of digital technologies in the services offered by public institutions in favor of economic reactivation for to get better the quality of life of the citizen. Articulated digital technologies, digital identity, digital services, data governance, interoperability, digital security and digital architecture for to get better the provision of services of public entities focused in citizenship, internal management and the relationship between them (SUPREME DECREE No. 029-2021-PCM, 2021). The National Fisheries Development Fund has a digital government plan and is framed by the Institutional Strategic Plan, a document that responds to the vision of the sector. The same that promotes the improvement of the efficiency and effectiveness of public administration entities, through the intensive use of information technologies (CHIEF RESOLUTION N ° 041-2021-FONDEPES / J, 2021). The *Benefits* They are related to the facilities of access to the digital platforms of the services provided by the institution. The *disadvantages* are the limitations of investment in technology, users with a high level of ignorance of the new tools, disinterest of the citizen in the modernization processes due to the lack of diffusion, generating distrust in their use.

With these initial reflections, set the goal how the requirements and resources to implement digital services in an institution and the benefits of a modern, efficient, inclusive and open state can be evidenced. For this, we examine how digital transformation is presented in contemporary empirical research, performance of use and regulations from the perspective of the administrative user and the citizen. The scope of the review has the following specific dimensions: digital technologies, digital identity, digital services, data governance, interoperability, digital security, digital architecture, user operability and citizen participation, which will make it possible to develop a analytical framework for future studies.

2. METHODS

The methodology of investigative analysis of the literature follows the guidelines of the PRISMA model (MOHER et al., 2009) (BRAZILIAN, 2021). This research was carried out in the international scientific database SCOPUS because it is complete and contains summaries and citations of multidisciplinary works of current knowledge and regulations. Records published between 2017 and 2021 were included. The research protocol involved the following terms: digital services or electronic government or digital platforms or information systems or management or public administration or governance or access to information.

The article identification stage included the following filters available on the SCOPUS platform: (a) analysis of scientific articles published in the last five years; b) writings published in Spanish, English or Portuguese. The current regulations of digital government and its regulations were also taken into account. The selection and compilation steps involved the reading of titles and summaries based on the following inclusion criteria: a) studies on digital services; b) studies on information systems; c) studies on the obstacles to electronic government in public management; d) studies that address the perspective of citizen access to information; e) studies on the actual use and ease of access to digital platforms by citizens resulting from empirical and original research; f) operational observation of administrative user, g) analysis of current regulations.

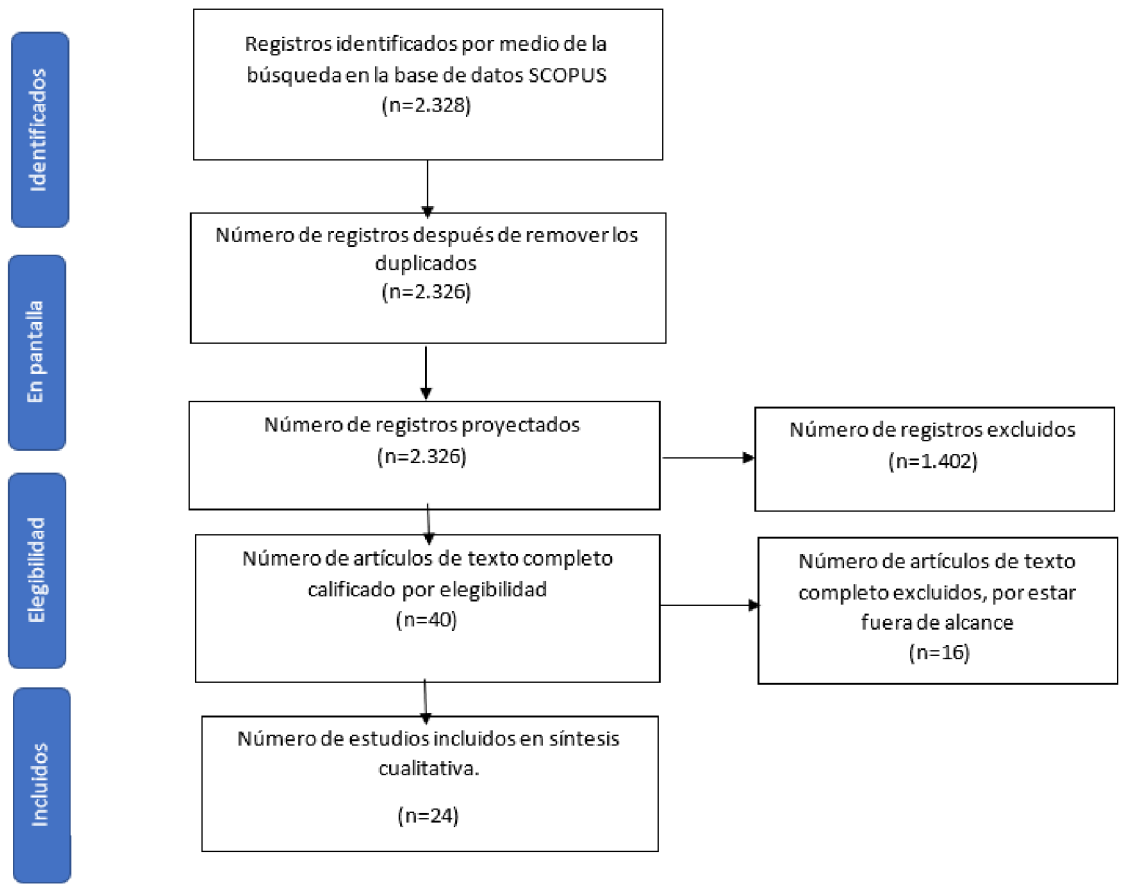
In the reading stage of the eligible texts, the following exclusion criteria were considered: (a) studies that do not use digital services; b) studies that do not exploit information systems; c) studies that do not explore the obstacles to electronic government in public management; d) studies that do not address the perspective of user access to information; e) studies that do not examine the actual use and ease of access to digital platforms by citizens resulting from empirical and original research; f) studies that do not deal with operational observation of administrative user, g) studies that do not carry out analysis of current regulations

The stage of examining the selected articles consisted of a thorough reading of the complete texts and the following was considered for data subtraction: (a) Accessibility problems to digital platforms by the citizen or difficulties in accessing the internet; (b) citizen's lack of interest in getting involved in public management processes to improve the delivery of services offered by institutions (c) political interests that do not help to invest in information technologies that allow eliminating bureaucracy (d) electronic governments that allow the proper management of state resources and provide benefits to citizens; (e) d) user perception contexts in the use of digital media. These search steps are represented in a flow in Figure 1,

3. RESULTS

A total of 2,328 studies were identified in the SCOPUS database (Figure 1). After removal of 2 duplicate studies, 2,326 studies remained for review. Of these, 1,402 were excluded after applying the selection criteria – year (2017 to 2021), language (Spanish, Portuguese, English), type of study (Articles and Regulations). After screening the titles and abstracts based on the inclusion and exclusion criteria adopted, 40 studies were eligible for full reading. Of these, 16 were discarded because they were not in the scope of the investigation. A total of 24 full studies were included for qualitative review.

Figure 1. Search flow in the SCOPUS database.



Source: survey data, 2021.

Table 1 below provides an overview of the characteristics of the 21 articles included in this analysis. It is observed that the number of empirical studies related to the implementation of digital platforms in institutions is increasing between the years 2017 (2/24) and 2021 (6/24). This trend indicates the growing need for researchers to study the use of information systems in order to optimize the delivery of public services to citizens. (SAHANENKO et al., 2021), considering the current scenario of prohibited percentage of access to electronic media and the Internet. It is pointed out that, although there are no articles included within the scope for the period from January to March 2022 (0/24) (given the time in which the data collection is being cut), there is the possibility of publications in the year 2022 with new terminologies and perspectives.

Table one. Summary of general characteristics of included studies

ARTICLE	IDEA
Year of publication	2021 (7/24) 2020 (7/24); 2019 (3/24); 2018 (5/24); 2017 (2/24).
Country of first author	Brazil (6/24); Colombia (2/24); Chile (4/24); Spain (7/24); Mexico (2/24); Peru (2/24); Ukraine (1/24).
Knowledge area	Social Sciences (14/24); Computer Science (3/24); Engineering (3/24); Public management (2/24); and Normativity (2/24).
Such studies	Articles (22/24) and regulations (2/24).
Methodological approach	Qualitative (14/24); quantitative (8/24); and quali-quanta (2/24).

Subject of the study objective	Access to public information by the citizen (4/24); operationalization of cyberspace by the public administration (1/24); use of digital tools in population services (1/24); participation in urban governance (1/24); use of electronic government based on Internet use skills (5/24); competition on online digital platforms (3/24); digital service management standards for the population (3/24); alignment between information systems and business processes (4/24); Digital Government Implementation Regulations (2/24).
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Source: survey data, 2021.

The 24 articles included come from 7 countries, distributed in 3 continents: America – Brazil (6/24), Colombia (2/24), Chile (4/24), Mexico (2/24) and Peru (2/24) ; Europe - Spain (7/11); Asia – Ukraine (1/24). This distribution demonstrates a common reality in global societies: the presence of digital platforms in the daily practices of citizens in the search for information on services. In addition, it suggests that the problems related to the disinformation of online systems that allow access to resources provided by the state, affect developed and developing countries. It is worth mentioning the growing trend in recent years of studies in developing countries in Asia: 2021 (Ukraine) and America: 2020 (Mexico; Chile; Colombia; Peru). The area of digital transformation has the largest number of studies in Social Sciences (14/11). However, the group of studies of other areas of knowledge is formed like this; Computer Science (3/24), Public Management (2/24), Regulations (2/24), Engineering (3/24) and constitutes a (42%) that indicates the multidisciplinary nature of the object of this review. It means to say that the investigated object integrates different interests and theoretical-methodological perspectives related to the axis of information, digital platforms, information systems, the Internet and public administration. Engineering (3/24) and constitutes a (42%) that indicates the multidisciplinary nature of the object of this review. It means to say that the investigated object integrates different interests and theoretical-methodological perspectives related to the axis of information, digital platforms, information systems, the Internet and public administration. Engineering (3/24) and constitutes a (42%) that indicates the multidisciplinary nature of the object of this review. It means to say that the investigated object integrates different interests and theoretical-methodological perspectives related to the axis of information, digital platforms, information systems, the Internet and public administration.

The included studies are in Spanish, English and Portuguese, defined as articles (22/24) and digital government regulations (2/24). All are due to empirical research, with lay users in the use of information systems, consisting of qualitative (14/24), quantitative (8/24) and quali-quantitative (2/24) methodological approaches. The empirical methods used were: online research (3); Observation (1); and interviews combined with online activities (1).

The objectives of these studies address the use of information technologies that facilitate obtaining public services in five perspectives: the first around the general environment of electronic government (5/24); the second directly linked to information systems (10/24); the third allowing access to information (4/24); the fourth related to public management (3/24); and the fifth the regulations of digital transformation (2/24). It should be noted that some goals do not address the term digital transformation in their statements. However, all studies address or address digital media platforms in methodology and/or results. In addition, they present results on the inconveniences -conflicts, risks, challenges, related to access to information on the provision of services on the Internet by institutions, considering the perspectives of the population.

The technology contexts analyzed are diverse: electronic government (5/24); digital services (3/24); information systems (4/24); digital platforms (3/24); access to public information and open government (4/24); public management (1/24); governance (1/24); public administration (1/24); and regulations in digital transformation (2/24). Some contexts do not present the implementation model of computer media for the purpose of information availability and access to public resources for the population. (Table 2).

Table two.Contexts, motivations and computer technology

ANALYSIS	CONTEXT	MOTIVATION FOR USE	COMPUTER TECHNOLOGY
(Fernandez, 2021)	Access to ongoing procedural information reserved for interested parties	The application of a new norm allowed access to the information, in addition to the interested parties themselves, to third parties of the procedural states in progress.	Institutional web publication
(Sahanenko et al., 2021)	Introduction of digital tools for use in communities	Improve the quality of service for the population through the provision of technology.	digital tools

(Duke, 2021)	Inescapable reference to solve the problems faced by urban cities	Technology as a tool to respond to the challenges facing cities, from security to climate change.	digital governance
(A. Martinez, 2021)	Provision of information society services for the purposes of electronic commerce regulations	Specifies to establish new legal regimes regarding the scope of use of digital platforms; and adapt them to their true contemporary role.	Institutional digital platforms
(Machado & Pilan, 2021)	Exhibition of delivery work using digital platforms	Influence and impact of the use of technology in physical delivery jobs and its adaptation to daily work in times of Covid - 19.	digital platforms
(Puche et al., 2021)	Development of information systems according to the needs and requirements	Develop an analysis framework that allows you to examine the information systems, and identify and prioritize different opportunities for improvement in them.	Information systems
(Supreme Decree No. 029-2021-PCM, 2021)	Establishes conditions, requirements and use of technologies in administrative procedures developed by public entities	Regulate the activities of governance and management of digital technologies in public entities in the field of Digital Government.	Digital government and its regulations
(Ferrer et al., 2020)	Allows economic tracking of an institution based on open government initiatives	It incorporates platforms available to the citizen that allows identifying irregularities in public contracts.	Access to information and open government
(Furtado, 2020)	Legislation on access to public information, policy to policies	Proposes legislation on access to demilitarized information and public information on the issue of public spending and anti-corruption transparency monitoring of acquisitions.	Access to public information on the web and open government
(Elias et al., 2020)	Social barriers prevent individuals from having broad and reflective information	Access to information, although it is a fundamental right, still presents problems for its material realization.	Access to information on the web
(Medeiros et al., 2020)	Use and operability of cyberspace through the internet by the public administration in the fight against Covid - 19	The distancing imposed by the health emergency has generated an approach to the use of digital technologies and media through the internet.	electronic government
(González et al., 2020)	Transition from an industrial society to an information society has developed a new way of	There is evidence of a great digital gap between those individuals who are entering the world and the	Electronic government and digital platforms

	dealing with information	digital natives, affecting institutional relations and those of citizens in the way of receiving and using information for resource management.	
(Pinacho & Cruz, 2020)	Technology and its contribution to transparency and accountability in public management	It allows the capture of information by officials obliged to show transparency and accountability for its treatment in the control bodies.	Access to information; Open government and electronic government.
(Garcia, 2020)	Rules of adoption of consumer protection to the personal data protection regulations and the right to digital consumption	It analyzes the supplies of digital content offered by contractual deals both to consumers who pay for something, and to those who, by way of consideration, provide their personal data.	Digital government and processing of personal data
(Rioseco & Philominraj, 2019)	Presents a self-assessment model using assisted technological means as a tool	The use of educational platforms allows the teacher to create batteries of questions that are used to configure different tests at different times. These tests can auto-correct and calculate scores automatically. number of times deemed appropriate	digital platforms
(M. Martínez et al., 2019)	Measures the consumption of advertising in digital media on the Internet and the regulation of personal data	Young adults are interested in the news and browse the internet between information overload, news repetition and the need not to get lost in the tangle of available sources without neglecting the registration of personal data and the treatment that they give them.	Digital platforms and internet browsing
(Araya et al., 2019)	Studies the relationship between technologies and their ability to influence business processes	It is true that the development and implementation of technological platforms and computer systems requires the support of senior management, the participation of technology managers is essential to achieve the alignment of these to the strategic objectives.	Information systems
(Legislative Decree No. 1412, 2018)	Digital government strategically uses digital technologies and data in	It covers the principles, policies, standards, procedures, techniques	Digital government and electronic government

	public management to create public value	and instruments used by public administration entities in digital governance, for the generation of public value.	
(Przeybilovicz et al., 2018)	Study the characteristics of the implementation of infrastructure and use of information technologies in Smart cities based on electronic government guidelines	This analysis strategically identified 4 points: without technology, legislation, citizen services and technology provision, which are interrelated for electronic government actions depending on each reality in its application to different municipalities.	electronic government; information and communications technology
(De Araujo et al., 2018)	It analyzes how the skills and facilities of internet access influence the use of services proposed by an electronic government.	Internet access preferably at home, or at work, or on mobile devices has a positive impact by belonging to the group of widely used Internet users, who, in turn, are more likely to use e-government services.	Electronic government and internet access
(Oaks, 2018)	Presents a focus on digital security requirements and standardization, with mechanisms to guarantee the effectiveness of its devices	There are substantial differences in digital security issues between various institutions, indicating that a comprehensive philosophy must be assumed in network and system security regulations, where administrations must manage procedures and ensure compliance.	Network Security and Information Systems; internet and digital regulations
(Pirela & Pulido, 2018)	Analyzes the introduction of digital tools as part of the curriculum of the information systems career of a university and its potential use and ease of access to services	Computer professionals are the ones to work on the development of digital skills that allow anyone to retrieve and use information not only for their daily lives but also for their academic needs.	Information systems and digital platforms
(Sour, 2017)	Indicates that electronic government facilitates transactions and the exchange of digital information between citizens and the public administration.	The electronic government allows the interaction and interrelation with the citizens, the private sector and the public organisms to improve; thus, with the support of ict, the opportunity is opened to broaden citizen participation towards government instances.	electronic government

(Kings, 2017)	The scenario of the request for legislative information requires that it be increasingly faster and be available digitally with certain requirements of publicity and legal certainty and inexcusable knowledge of the law	Analyzes the rule of law of access and knowledge of the contents of legal texts under modern information management standards that allow efficient and effective storage, processing, search, retrieval and communication of regulations.	Digital services and platforms
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Source: survey data, 2021.

The studies present 25 digital implementation requirements in a public institution (Table 3). In this review, these requirements are grouped into a network of meta-requirements made up of four categories: governance and digital management (5), digital transformation processes (9), strategic instruments of the system (6) and digital government plan (5). The national digital transformation system is implemented in all public entities through organizational units that establish their own organizational governance documents or have been explicitly delegated to do so; in accordance with the nature of their functions and their affinity with the matters of the System, under the responsibility of the highest administrative authority or whoever takes their place in the entity. Since this digital transformation system does not require the creation of dedicated organizational units, the entity can evaluate its creation in accordance with current legal provisions.(SUPREME DECREE No. 157-2021-PCM, 2021).The focus of this analysis is to present practical methodologies for the implementation of digital governance(GONZÁLEZ et al., 2020).It sought to present in an articulated way with digital contexts, its use and access by citizens to be used in the search for public services.

Table three.Requirementslinked to the migration of digital transformation.

IMPLEMENTATION GOAL	IMPLEMENTATION REQUIREMENTS	STUDIES AND/OR REGULATIONS
Governance and digital management	Governance and digital transformation committee	(Legislative Decree No. 1412, 2018);(Duke, 2021);(Supreme Decree No. 157-2021-PCM, 2021)
	Government and digital transformation leader	(Supreme Decree No. 157-2021-PCM, 2021);(Supreme Decree No. 033-2018-PCM, 2018);(González et al., 2020)
	Digital Trust and Security Officer	(Supreme Decree No. 157-2021-PCM, 2021);(Supreme Decree No. 029-2021-PCM, 2021);(Emergency Decree No. 007-2020, 2020);(Sour, 2017)
	Data Governance Officer	(Supreme Decree No. 157-2021-PCM, 2021);(Legislative Decree No. 1412, 2018);(Supreme Decree No. 029-2021-PCM, 2021);(Pinacho & Cruz, 2020)
	Personal Data Officer	(Supreme Decree No. 157-2021-PCM, 2021);(Supreme Decree No. 029-2021-PCM, 2021);(Law 29733 Protection of personal data, 2011);(De Araujo et al., 2018);(Przybilovicz et al., 2018)
Digital transformation processes	Design of services and processes	(Supreme Decree No. 157-2021-PCM, 2021);(Medeiros et al., 2020);(Sahanenko et al., 2021)
	Digitization of processes	(Supreme Decree No. 157-2021-PCM, 2021);(Ferrer et al., 2020)
	Digitization of services	(Supreme Decree No. 157-2021-PCM, 2021);(Elias et al., 2020)
	Digitization of relations with the	(Supreme Decree No. 157-2021-

	general public	PCM, 2021);(Fernandez, 2021)
	Governance and data management	(Legislative Decree No. 1412, 2018);(Supreme Decree No. 157-2021-PCM, 2021);(Furtado, 2020)
	Governance and management of digital technologies	(Supreme Decree No. 157-2021-PCM, 2021);(Rioseco & Philominraj, 2019)
	Management of digital skills	(Supreme Decree No. 157-2021-PCM, 2021);(Machado & Pilan, 2021)
	Management of institutional culture change applied to digital transformation	(Supreme Decree No. 157-2021-PCM, 2021);(Martinez, 2021)
	Management of cultural change and knowledge	(Supreme Decree No. 157-2021-PCM, 2021);(Kings, 2017)
Strategic instruments of the system	National digital transformation policy	(Supreme Decree No. 157-2021-PCM, 2021);(Garcia, 2020)
	National strategies for digital transformation	(Supreme Decree No. 157-2021-PCM, 2021);(Duke, 2021)
	The laboratory of governments and digital transformation	(Supreme Decree No. 157-2021-PCM, 2021);(Araya et al., 2019)
	The National Network of Digital Innovators	(Supreme Decree No. 157-2021-PCM, 2021);(Pirela & Pulido, 2018)
	The digital innovation index	(Supreme Decree No. 157-2021-PCM, 2021);(Puche et al., 2021)
	The national digital citizenship observatory	(Supreme Decree No. 157-2021-PCM, 2021);(Oaks, 2018)
Digital Government Plan	Diagnosis of digital governance in the institution	(Headquarters Resolution No. 041-2021-FONDEPES / J, 2021);(González et al., 2020)
	Objectives of the digital government plan	(Headquarters Resolution No. 041-2021-FONDEPES / J, 2021);(De Araujo et al., 2018)
	Digital project portfolio	(Headquarters Resolution No. 041-2021-FONDEPES / J, 2021);(Przybilovicz et al., 2018)
	Project Execution	(Headquarters Resolution No. 041-2021-FONDEPES / J, 2021);(Pinacho & Cruz, 2020)
	Follow-up of execution of digital projects	(Headquarters Resolution No. 041-2021-FONDEPES / J, 2021);(González et al., 2020)

Source: survey data, 2021.

3.1. Governance and digital management

Digital governance is regulated by the digital government law and its regulations, whose objective is to establish the digital governance framework and the legal regime for the use of digital technologies in public administration (LEGISLATIVE DECREE No. 1412, 2018). The implementation of digital transformation is born with a proactive management that represents the ability of public entities to anticipate the needs of people and respond to them quickly (DUKE, 2021). To articulate these needs, digital governance establishes as a first point the conformity of the government and digital transformation committee (SUPREME DECREE No. 157-2021-PCM, 2021). Subsequently, the roles for data and information management for digital transformation in public administration entities are defined, which are: a) Leader of government and digital transformation, acts in accordance with the supreme decree that creates the unique digital platform of the Peruvian state and establishes additional provisions for the development of digital government (SUPREME DECREE No. 033-2018-PCM, 2018). The generation of information services provided and consumed through the internet or any other electronic channel, originating from the process of co-creation between citizens and the public administration, must be articulated by a digital leader (GONZÁLEZ et al., 2020); b) Security and Digital Confidence Officer, in accordance with the provisions of the (LEGISLATIVE DECREE No. 1412,

2018), legislative decree approving the digital government law and its regulations (SUPREME DECREE No. 029-2021-PCM, 2021), as well as in the Emergency Decree that approves the digital trust framework and provides measures for its strengthening (URGENCY DECREE No. 007-2020, 2020). The governments of different nations have adopted new measures to meet the needs of their citizens, which are constantly evolving to achieve a safe and reliable virtual interaction environment. (SOUR, 2017); c) Data Governance Officer, who acts in accordance with the provisions of the legislative decree that approves the digital government law and its Regulations (LEGISLATIVE DECREE No. 1412, 2018) (SUPREME DECREE No. 029-2021-PCM, 2021), ratified in (SUPREME DECREE No. 157-2021-PCM, 2021). Governs data constituted by technical and regulatory instruments that establish minimum requirements to be implemented according to the legal, technological and strategic context, which ensures a basic and acceptable level in the collection, processing, publication, storage and opening of data (PINACHO; CROSS, 2020); d) Personal Data Officer, who acts in accordance with the rules established on the protection of personal data (Supreme Decree No. 157-2021-PCM, 2021) (Supreme Decree No. 029-2021-PCM, 2021). Manages data of personal application, contained or destined to be contained in personal data banks of public administration and private administration, whose treatment is carried out in the national territory (LAW 29733 PROTECTION OF PERSONAL DATA, 2011). The implementation of the electronic government and its service consumption platforms must guarantee the privacy of the citizen's personal data, thus preventing such data from being trafficked and/or illicitly used. (DE ARAUJO et al., 2018) (PRZEYBILOVICZ et al., 2018).

3.2. Digital transformation processes

To achieve the desired objectives, digital innovation in companies requires a review of all current processes and the necessary changes (SAHANENKO et al., 2021). The current debate is whether companies should continue to digitize business processes or undertake a complete digital transformation (MEDEIROS et al., 2020). The use of data, digital technologies and the development of processes aimed at creating public value, understanding needs and increasing efficiency, all of them have an impact on the social well-being of citizens (URGENCY DECREES No. 006-2020, 2020); The following are the processes to be taken into account when applying the digital transformation process: a) Design of services and processes according to the (SUPREME DECREE No. 157-2021-PCM, 2021). To meet current and future business needs, the design of IT services must be appropriate and innovative, including their architectures, processes, policies, and documentation. (SAHANENKO et al., 2021) (MEDEIROS et al., 2020); b) Digitization of processes established in the (SUPREME DECREE No. 157-2021-PCM, 2021). The business and socioeconomic fields have made a 360-degree turn since the rise of the Internet and new technologies. This allows us to create new business models, improve analytical and predictive capacity both internally and externally, and improve the effectiveness and efficiency of company processes. (FERRER et al., 2020); c) Digitization of services from the (SUPREME DECREE No. 157-2021-PCM, 2021). Digitizing services helps governments meet public expectations and become more efficient and resilient. The task is complex, but a proven formula can help them move quickly and efficiently (ELIAS et al., 2020); d) Digitization of relations with the general public (Supreme Decree No. 157-2021-PCM, 2021). The digital is invading various aspects of life, such as production, social relations, health, education and consumption. This has led to the current talk of communities, economies, governments and digital identities. Due to the increasing use of digital technology and widespread access to the Internet, people, governments and markets are constantly connected. (FERNANDEZ, 2021); e) Governance and data management (SUPREME DECREE No. 157-2021-PCM, 2021). The representation of information and concepts expressed in any form suitable for its processing, storage, communication and interpretation is defined as data by data governance and data management. (LEGISLATIVE DECREE No. 1412, 2018). For companies to achieve their goals, they need a system that guarantees effective and efficient use of information (FURTED, 2020); f) Governance and management of digital technologies (Supreme Decree No. 157-2021-PCM, 2021). It is the articulation and concretization of public interest policies with various actors (State, civil society and private sector) to achieve competencies and cooperation to create public value and optimize resources using digital technologies. (RIOSECO & PHILOMINRAJ, 2019); g) Management of digital skills (Supreme Decree No. 157-2021-PCM, 2021). Expresses the attitude and ability to work effectively in a modern and changing digital environment (MACHADO; PILAN, 2021); h) Management of institutional culture change applied to digital transformation (Supreme Decree No. 157-2021-PCM, 2021). Before purchasing any digital tool, you need to understand its purpose, goals, and intended use. And that is where organizational culture change becomes critical. This change in organizational culture requires understanding that the goal of digitization is not just to do a better job, but to follow the global trend (MARTINEZ, 2021); i) Management of cultural change and knowledge (Supreme Decree No. 157-2021-PCM, 2021) Institutions are vital in society because they are responsible for satisfying individual needs, either through products and services or by combining common characteristics. These organizations must have a business or organizational culture that allows knowledge management (KINGS, 2017) (MARTINEZ et al., 2019). Public entities implement the processes listed, in accordance with the provisions of numeral 9.2 of article 9 of the (SUPREME DECREE No. 157-2021-PCM, 2021), as well as those regulations issued by the governing body. As long as the processes create value for the private sector, they can be used as a model.

3.3. Strategic instruments of the system

The strategic tools of the National Digital Transformation System are a set of interconnected tools that guide, direct, accelerate and promote the digital transformation of the country. The strategic tools of the System are: a) The national digital transformation policy (SUPREME DECREE No. 157-2021-PCM, 2021). Developed by the Presidency of the Council of Ministers through the Secretary of Government and Digital Transformation in accordance with the corresponding regulations. The national digital transformation policy defines the goals, objectives, standards, actions, services, indicators, activities and responsible parties (GARCIA, 2020); b) National strategies for digital transformation (SUPREME DECREE No. 157-2021-PCM, 2021). They are active, dynamic and evolutionary tools developed within the National Digital Transformation Policy. Includes national strategies on information technologies, smart cities, distributed ledgers, 3d printing, artificial intelligence, data governance, digital security, digital economy, digital talent, and other emerging technologies (DUKE, 2021); c) The governance and digital transformation laboratory (SUPREME DECREE No. 157-2021-PCM, 2021). It is a collaborative space for public and private entities to co-create digital platforms, technological solutions and services; as well as to promote the development of digital talent and the promotion of a digital society (ARAYA et al., 2019); d) The National Network of Digital Innovators (SUPREME DECREE No. 157-2021-PCM, 2021). It is a community of innovators from the public and private sectors, academia and civil society, through which actions are promoted to share public and private digital innovations. It allows to assist the public and private sectors of developing countries by promoting the use of new digital technologies and fostering public-private partnerships in digital innovation. (PIRELA; POLISHED, 2018); e) The digital innovation index (SUPREME DECREE No. 157-2021-PCM, 2021). It is a tool to assess the maturity of the country's digital innovation and establish a roadmap to achieve more agile and flexible results for citizens (PUCHE et al., 2021); f) The national observatory of digital citizenship (SUPREME DECREE No. 157-2021-PCM, 2021). Allows the use of the national digital governance platform and the services of the national digital security center, together with academia and experts who carry out diagnoses, technical and independent monitoring (OAKS, 2018).

3.4. Digital government plan

The (LEGISLATIVE DECREE No. 1412, 2018) approves the Digital Government Law, whose objective is to improve the delivery and accessibility of digital services that benefit citizens and promote public-private collaboration, citizen participation and transparency. Now, to adapt to the new realities in which digital technologies are changing human activities and the Peruvian state is not exempt, the digital government secretariat presents the guidelines for the formulation of the digital government plan (GUIDELINES FOR THE FORMULATION OF THE DIGITAL GOVERNMENT PLAN, 2018). This document examines the main requirements to develop a digital government plan, using the National Fisheries Development Fund as an example of implementation: a) Diagnosis of digital governance in the institution (CHIEF RESOLUTION N ° 041-2021-FONDEPES / J, 2021). Determines the current state of digital government in the entity based on services and processes, the technological infrastructure (software, hardware, services), the roles and organizational structures for the management of digital technology (GONZÁLEZ et al., 2020); b) Objectives of the digital government plan (CHIEF RESOLUTION N ° 041-2021-FONDEPES / J, 2021). These indicators and objectives must be aligned and articulated with the institutional strategic objectives of the entity defined in its institutional strategic planning. (DE ARAUJO et al., 2018) c) Portfolio of digital projects (CHIEF RESOLUTION N ° 041-2021-FONDEPES / J, 2021). Every institution must learn to manage operations at two speeds: one in which it is agile to accelerate changes and the other in which it guarantees the traditional ones that support the continuity of the company. This phase defines the digital government projects necessary to obtain new capabilities and, therefore, achieve the digital objectives of the previous phase. (PRZEYBILOVICZ et al., 2018); d) Execution of Projects (SUPREME DECREE No. 157-2021-PCM, 2021). All the activities and stages necessary to achieve an objective are managed through digital project management processes (PINACHO; CROSS, 2020) and Follow-up of execution of digital projects (CHIEF RESOLUTION N ° 041-2021-FONDEPES / J, 2021). Technological advances and the disruption of physical formats have allowed product development methodologies to enter an era of work processes. It is the set of functions and tasks. Each goal/requirement has its own value to the customer and an estimated cost to complete (GONZÁLEZ et al., 2020).

4. DISCUSSION

Governing implies managing the relationships between various political and technical actors involved in deciding, executing and evaluating public affairs. This process is characterized by both competition and cooperation. (DE ARAUJO et al., 2018). The objective is to improve the (horizontal) relationship between public and private actors, improve decision-making, management and collective development, with an emphasis on integration and interdependence. (GONZÁLEZ et al., 2020). Therefore, digital governance is configured as the discipline that must be applied for the well-being of citizens, companies and institutions, as well as for the competitiveness of the country and the region. (SOUR, 2017). Which means that it is not just a digital agenda for the State to apply.

Digital transformation includes, but is not limited to, digital government, digital economy, digital connectivity, digital education, digital innovation, digital services, digital citizenship, digital inclusion, digital trust, digital health, digital justice, digital talent, and e-commerce. (SUPREME DECREE No. 157-2021-PCM, 2021); and everything that has

to do with the digital transformation of the country (LEGISLATIVE DECREE No. 1412, 2018). Through regulatory harmonization and the development of collaborative initiatives, it allows the state to integrate, complement and articulate with other functional and administrative systems for the fulfillment of its purposes, the application of public policies and plans. (PRZEYBILOVICZ et al., 2018). It brings together the actions and initiatives of its members, which saw civil society organizations, the public sector, citizens and the private sector working together to promote digital citizenship, the building of society and the digital transformation of the country. (SUPREME DECREE No. 029-2021-PCM, 2021).

The results reveal that the requirements to overcome digital transformation barriers are numerous and vary depending on application contexts and situational motivations. Some of the goals presented are recurring and corroborate findings from previous research, such as the need for availability and reliability. (MEDEIROS et al., 2020). Others, such as the obstacles and conflicts mentioned in the four implementation goals, were originally presented from a transition perspective.

Consequently, we have brought them together under the heading of good information practices. (SAHANENKO et al., 2021), from a perspective of the transition of digital media contexts (DE ARAUJO et al., 2018) (LLOYD, 2015), motivational and implementation goals (SUPREME DECREE No. 157-2021-PCM, 2021), it allows to situate the dynamics of its transition and its impacts throughout the information management process in public management. This approach implied the alignment of objectives, requirements, motivations, contexts and application in this study, which allowed the identification of a web of interrelated dimensions: governance and digital management, digital transformation processes, strategic instruments of the system and a governance plan. digital.

Although the included studies are not the multiple goals and requirements (Graph III) perceived in the different contexts, it is observed that the approach based on information digitalization practices is central in these studies. Furthermore, implementation research is primarily linked in only six studies. (GONZÁLEZ et al., 2020) (DE ARAUJO et al., 2018) (SOUR, 2017) (PRZEYBILOVICZ et al., 2018) (PINACHO; CROSS, 2020) (SAHANENKO et al., 2021). This finding indicates that research on the implementation of electronic governance in institutions tends to be prioritized given the situation and the near future of the line of access to public services in public administration.

On the other hand, when articulated in contexts, motivations and trust in cyberspace, the study of the obstacles to this application is an alternative to understand the dynamics of citizen participation in digital platforms. (MACHADO; PILAN, 2021); in the sense that it reveals other complex subjective and situational questions, such as the various meanings that information can assume, the various administrative objectives and the various responses that the population can present in situations of interaction (FERRER et al., 2020). In this way, the web of interconnected goals and objectives can be used as an analytical resource for complex questions about Internet-based information systems.

Many of the studies include sociological aspects common to digital platforms, such as public availability, global changeability, immediacy of information, ease of use, context relevance, and user experience. (FERNANDEZ, 2021). Adopting this perspective cannot cover all the obstacles that arise with the use of IT systems in the context of institutional digitization itself, but it has been noted that some of the studies have done so. (DUKE, 2021) (FURTED, 2020) (ELIAS et al., 2020) (RIOSECO; PHILOMINRAJ, 2019); which indicates that the sociotechnical perspective and the transition contexts are integrated.

Motivations regarding digital implementation, in some studies included (A. Martinez, 2021); (Kings, 2017); (Garcia, 2020); (M. Martínez et al., 2019); (Oaks, 2018) know the motivations presented in the literature, such as the need to increase knowledge about digital media. Others are presented in an original way, such as combating stigma and managing transitions. (PUCHE et al., 2021). Some studies (ARAYA et al., 2019); (PIRELA; POLISHED, 2018); (ELIAS et al., 2020) reveal that due to negative perceptions of computer systems, subjects have no motivation to use them and search for information on the Internet, associated with this is a lack of credibility and trust (SOUR, 2017). This suggests that the pre-existing barriers in the dimension of the user experience, as well as the tensions of the transition context, influence the motivations to use information platforms in government management. Consequently, interventions based on digital media by institutional actors and public policies must take them into account to optimize public communication strategies in the provision of services to the general public.

The need to qualify the literature has some limitations. The research terms were designed to understand the object studied, but it is possible not to know the terminology used by other studies of the same scope. This is because, in the context of digital transformation and information studies, the target object can take a variety of terminological forms, such as difficulties, obstacles, challenges, restrictions and impediments. It is also recognized that the use of a single database limits the number of studies that can be considered relevant. Although the PRISMA model expresses this understanding, a single database was chosen for convenience, as the study is not intended to be a 'systematic review of the literature', but rather an 'exploratory review'. The results of this review allow us to understand the multiple barriers that prevent the effective use of computer systems to access public resources and services. In future studies it is suggested to expand the meta-requirements for the digital technologies that agglomerate and feed them.

5. FINAL CONSIDERATIONS

The national digital transformation system is implemented in each public entity through organizational units defined in its government documents or explicitly delegated by the highest administrative authority of the entity or by the authorized representative of the entity. A national digital transformation system does not require the creation of dedicated organizational units, but the entity can evaluate the creation of these units in accordance with the current legal framework. In accordance with the applicable regulations, public entities provide permanent, free, secure and open access information services on the national interoperability platform for government and digital transformation purposes. Instruments are in place to ensure high availability and scalability of these products and services,

Through the secretariat of government and digital transformation, the presidency of the council of ministers promotes the corresponding actions for the exchange of data between public administration entities and private sector organizations. Personal data, transparency, digital governance, policies and digital trust are part of the objective of promoting the digital economy in the current legal framework. Business intelligence, automation and robotics, technology, processes and the fact that people are beginning to play an important role in the application of public policies characterize the so-called information and knowledge society in the context of the fourth industrial revolution.

Digital platforms, while facilitating access and sharing of information about services for Lego citizens, add to the complexity of information management, care and decision-making processes. These issues arise from the intersection of issues related to the dynamics of digital platforms and issues related to digital transformation contexts.

Understanding these problems and finding a solution through trial and error is a difficult task, since it involves multiple and complex dimensions that surround the materiality of the platforms. In this sense, working on the essential minimum in the application of digital media is positioned as an alternative strategy to decipher or reach the subsequent layers related to the use of information systems and the Internet. In this review, we show how the perceptions identified in the literature about the use of lay users of these computing platforms form and connect a network consisting of a goal of: digital governance and management, digital transformation processes, strategic instruments of the system and digital government plan.

The use of computer platforms and the Internet to access information and request services effectively implies the elimination of these barriers through the application of digital governance contexts, according to this article. To put it another way, it's not about dealing with a single requirement, but the whole thing. In this sense, I believe that these digital disorders must articulate situational and collaborative practices between subjects who share common experiences with the mediation of contingency by individuals and/or public management professionals.

We hope that the results of this study will be useful for researchers and professionals working on the digitization of institutions and their publication online. Likewise, the objectives that are shown against specific structural barriers, can serve as a basis for further research on new computing challenges.

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