

# DIGITAL TRANSFORMATION OF PUBLIC SERVICES SYSTEMATIC REVIEW OF KEY SUCCESS FACTORS

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## ABSTRACT

The digital transformation of public services, particularly through e-government, is crucial to increasing the efficiency, transparency and accessibility of government services, especially in developing countries. Although significant efforts have been made, public sector organizations continue to face persistent challenges in the implementation of digital services, often leading to suboptimal outcomes. While numerous studies have explored critical success factors (CSFs) across different contexts, a systematic consolidation of these findings remains limited, hindering both theoretical integration and practical application. This systematic review addresses that gap by applying the PRISMA approach to data collected between 2004 and 2024 from the Scopus and Web of Science databases, aggregating findings from multiple case studies conducted across various countries. The analysis consists in identifying and detailing the determining factors for the successful digital transformation of public services, in order to support the implementation of new initiatives. The results highlight factors such as strong leadership and governance, availability of technological infrastructure, security and confidentiality of systems, as well as quality of systems, information, services and ease of use. In conclusion, this study proposes a structured framework for the implementation of sustainable and scalable digital public services, and enhancing the inclusiveness of public services.

**Keywords:** *Key Success Factors, Determinants, Digital Transformation, Public Services, E-Government.*

## 1. INTRODUCTION

Digital transformation in the public sector has become a pivotal priority for governments worldwide, driven by the need to deliver efficient, transparent, and accessible services to citizens [1], [2]. This transformation is an ongoing process in which traditional structures are converted into digital ones with the help of information and communication technologies (ICT) [3]. E-government refers to the use of information technology (IT) to improve competence, effectiveness, efficiency and accountability in the operation of public services [4]. By facilitating communication between citizens and public administrations, e-government is recognized as a key enabler for optimizing administrative processes and enhancing citizen participation. Early e-government initiatives primarily aimed to transition from paper-based systems to electronic platforms. However, contemporary approaches emphasize the need to integrate technology into the core of public administration processes to achieve more comprehensive reforms. These initiatives have become increasingly complex, necessitating not only

technological upgrades but also significant changes in organizational structure, culture, and procedures [5]. As a result, digital transformation is recognized as a multifaceted process that involves strategic leadership, a robust ICT infrastructure, user trust, organizational readiness, and collaboration across sectors [6].

Although many studies indicate that most e-government initiatives tend to stagnate at the transaction stage, very few have succeeded in delivering sophisticated, truly efficient and transparent value-added e-services [7]. Moreover, e-government is widely seen as a complex societal system encompassing organizational, social, and economic dimensions [8].

Researchers and practitioners have sought to identify “critical success factors” (CSFs) that consistently predict or foster positive outcomes from this perspective [9]. These critical success factors are those that guarantee the overall success of e-government projects. Among them, a solid political framework, reliable technological infrastructures and ongoing training for public servants are essential to the success of these projects [1], [10].

Furthermore, stakeholder involvement and inter-institutional collaboration are also recognized as key elements in overcoming the obstacles to digital transformation [11].

Despite numerous studies identifying various CSFs, few provide a comparative overview of cases from different countries or local contexts that influence the success or failure of digital service and e-government projects most research offers isolated case analyses lacking a cross-cutting, integrated approach that would yield insights applicable to diverse international settings. To fill this gap in the literature, this study aims to explore the critical success factors influencing digital transformation in the public sector [12].

Recent studies have highlighted the value of combining systematic literature reviews with bibliometric tools to improve analytical rigor and thematic understanding. For instance, Aras and Büyüközkan [13] conducted a PRISMA-based literature review to construct a digital maturity model and used Biblioshiny for bibliometric mapping, including keyword co-occurrence and thematic development. Their methodology demonstrated how bibliometric analysis can support the construction of fragmented knowledge domains and guide conceptual development. Building on this approach, this study combines the PRISMA protocol with Biblioshiny and VOSviewer to ensure a systematic and intuitive investigation of critical success factors for digital transformation of public services in different contexts. The study aims to identify pertinent concepts, analyse existing theoretical frameworks, review current publications, and evaluate their consolidated contents and outcomes, thereby enabling decision-makers to tailor e-government initiatives and digital transformation projects to local contexts and enhance their effectiveness.

In this systematic review, we identified six categories of success factors: Organizational, Human, Technological, Innovation and Sustainability, Governance and Political, Socio-Cultural, and Environmental. Additionally, we highlighted the five most recurrent factors in the existing literature: leadership and strategic governance, ICT infrastructure and accessibility, quality of systems, information, and services, security, privacy, and risk management and social inclusion and citizen trust.

Accordingly, this study addresses the central research question: What are the key factors determining the success of the digital transformation

of public services, and which categories of factors have been predominant in existing research to study and analyse this transition?

Following this introductory section, section 2 elaborates on the systematic review methodology, detailing the search strategies, the inclusion and exclusion criteria, and the analytical tools employed to categorize and interpret the selected studies. Section 3 outlines the results of our bibliometric analysis of existing research on the determinants of digital transformation in public and government services. Section 3 provides a comprehensive discussion of these findings, addresses the study's limitations, and suggests avenues for further research, culminating in overall conclusions and practical recommendations for stakeholders involved in the digital transformation of public services.

## 2. LITERATURE REVIEW

Digital transformation in the public sector serves as a key lever for enhancing accessibility and organizational efficiency through the adoption of information technologies (IT) solutions [12]. More specifically, it helps to reduce operating costs, increase productivity and diversify the quality of services offered [12] many countries are thus using this digital transformation to boost their productivity and organizational performance [14]. This has necessitated a change in the structure of public administration, which has evolved into a new phenomenon known as e-government [15] in order to meet the growing expectations of citizens, who demand a more effective and efficient public service [16]. Information technologies (IT) can transform government structures, improve service quality, enhance citizen participation and bridge the digital divide [17].

However, e-government implementation remains complex: some initiatives have failed partially or completely [11], and research has sometimes neglected in-depth analysis of the implementation process. Within this context, key success factors are crucial for ensuring the performance and objectives of these initiatives. As defined by Bullen and Rockart, key success factors are “the limited number of areas in which satisfactory results will ensure successful competitive performance for the individual, department, or organization” [18]. These are the essential areas where “things must go right” for the organization to thrive and achieve its goals [18]. In summary, digital transformation in the public sector involves a systemic reorientation of governmental structures and processes to leverage

the advantages offered by digital technologies. E-government is a vital aspect of this transformation, focusing specifically on digitizing public services, enhancing transparency, and promoting citizen engagement. Despite the significant potential for improved service quality, accountability, and operational efficiency, digital transformation efforts still face obstacles, such as the digital divide, resource constraints, and privacy issues. Nevertheless, the literature highlights a set of key success factors including strategic leadership, strong ICT infrastructures, interagency collaboration, and robust security frameworks that are critical for successful implementation. By integrating these key success factors into the planning and execution of e-government initiatives, public administrators and policymakers can more effectively navigate the complexities of digital transformation, ensuring lasting benefits for both government entities and the citizens they serve.

### 3. RESEARCH METHODOLOGY

#### 3.1 Literature review methodology

Our article presents a systematic review of the literature, aiming to synthesize the available knowledge on the main key success factors for the digital transformation of public services, as well as the characteristics influencing e-government projects.

To conduct this study, we adopted a rigorous and widely recognized methodology: the PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) approach. This method was applied to carry out an exhaustive and up-to-date systematic review of the literature. In addition, our work was enriched by a bibliometric analysis offering an in-depth, structured exploration of the subject to enhance the quality and scope of the results obtained. “Bibliometric studies are quantitative approaches to identifying, evaluating and monitoring the published studies available in each field or line of research. They aim to examine the relationships between disciplines, research areas, specialties and individual publications. Unlike bibliometric studies, systematic literature reviews are carried out to identify publications and analyze their content and consolidated results”[19].

This research is based on a qualitative approach characterized by a rigorous procedure. First, we will carry out a bibliometric analysis of the selected scientific publications in order to map the concepts related to the digital transformation of public

administrations. Next, we will carry out a content analysis of the selected publications to highlight the determining factors of this transformation. This will make it easier for other researchers to identify research relevant to their field of interest.

For this study, the SCOPUS and Web of Science databases were selected for their advanced, high-performance search engines incorporating complex Boolean expressions, and numerous filters enabling precise refinement of the results of the retrieved publications, as well as for their extensive and wide-ranging coverage of specialized journals in our research field.

Our approach began with a structured process, integrating a search query formulated using a set of keywords in English-language keywords related to critical success factors in the digital transformation of public services, as follows:

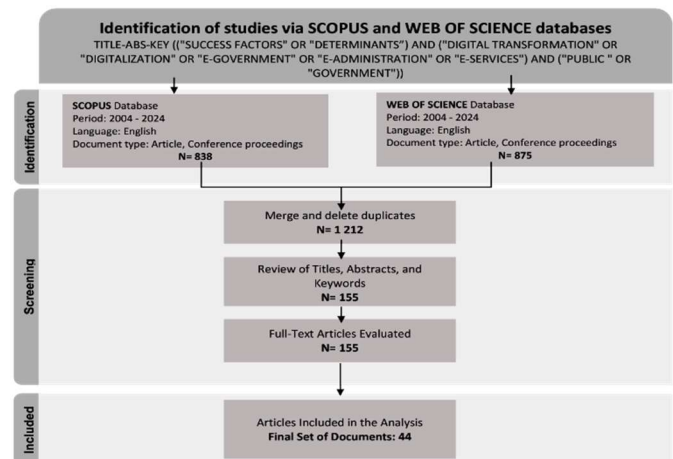


Figure 1: Flow of the Systematic Literature Review Search Process. Source: Author.

By using the search query illustrated in figure 1, we were able to ensure that all relevant and corresponding documents were included. Employing a variety of keywords in our study enabled us to cover a wide range of relevant research and ensure a thorough exploration of the literature, with terms such as “success factor”, “Determinants” and “digital transformation”, resulting in an initial selection of 1999 articles: 1061 in Scopus and 938 in web of science.

Several inclusion criteria were established to ensure the relevance and appropriateness of the studies to our subject. Criteria included journal or conference publications published between 2004 and 2024, restriction to journal articles and conference proceedings, and only articles in English were included, as this is an official international language.

This resulted in 838 documents in Scopus and 875 in Web of Science. Following the import of all references into Zotero, duplicate entries were removed, yielding a final set of 1212 documents. After screening titles, keywords, and abstracts, 155 articles were deemed pertinent.

To validate each publication's alignment with our research question, an in-depth content review was performed, leading to a final selection of 44 articles strictly focused on identifying, synthesizing, and analyzing the key success factors of digital transformation in public services.

### 3.2 Literature review analysis methodology

Compared to previous studies such as Müller and Skau (2015) and Napitupulu et al. (2017) that relied on narrative or meta-ethnographic approaches, this study used a PRISMA-guided systematic review combined with bibliometric analysis using Biblioshiny an R package from Bibliometrix that enables bibliometric analysis without coding and offers various visualization options [20]. The Biblioshiny tool was selected because of its advanced visualization capabilities and superior functionality compared to other analysis tools. It is specifically designed to perform exhaustive and rigorous bibliometric analysis, providing in-depth insights into the dynamics and structures of scientific research. This tool can process a range of data, including journal names, article titles, author and journal keywords, author details, country affiliations, and research institutions. The process followed for our bibliometric analysis with the BiblioShiny tool involved three distinct phases: data configuration, data review, and presentation and evaluation of results. This methodological integration increases both the analytical depth and comparability across studies. While our results confirm key CSFs such as leadership and infrastructure, they also reveal transversal factors such as regulatory and legal frameworks and inter-institutional cooperation that have been less emphasized in previous work.

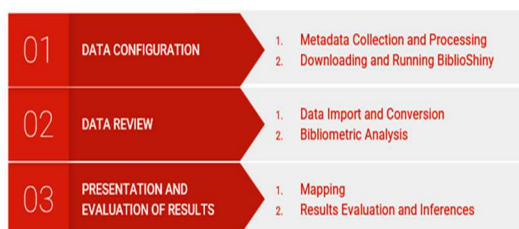


Figure 2: The BiblioShiny Workflow

## 4. RESULTS OF THE LITERATURE REVIEW

### 4.1 Bibliometric Analysis

A statistical analysis of the scientific output in Scopus and Web of Science covering the 2004–2024 period identified 603 sources producing 1212 documents. These publications show a notable increase, with an average annual growth rate of 15.91%. In total, 2837 authors contributed, including 147 sole authors. International collaborations account for 26.16% of the total, with an average of 2.96 co-authors per document. More than 3200 keywords were used to characterize the research. To date, over 50000 references have been cited in these 1212 documents, with an average cited reference age of 6 years approximately and a mean of 19 citations per article.



Figure 3: Analysis Provided by Biblioshiny Using Our Literature Review Metadata.

### 4.2 Distribution and evolution over time of the number of articles published annually internationally: 2004-2024

To analyse the evolution of the literature, it is essential to examine research trends. Figure 4 illustrates the temporal evolution of scientific production dealing with the digital transformation of public services, between the year 2004 and 2024. The data show a steady increase in published articles, with a notable surge starting in 2017 and peaking in 2023. Although 2024 is still ongoing, it was included given that numerous publications are under review or awaiting submission. This development can be attributed to several determining factors, Firstly, digital transformation has become a critical topic, driven by the growing integration of digital technologies in businesses, public administrations, and broader society. The uptick in publications after 2018 coincides with governments increasingly adopting advanced technological solutions to enhance efficiency and service quality. Moreover, the COVID-19 pandemic acted as an accelerator,

compelling organizations to rapidly implement digital solutions for operational continuity, remote work, and online services. This exceptional context has intensified the interest of researchers in the implications and strategies linked to digital transformation. The decrease observed in 2024 could be explained by the delays inherent in the publication process in scientific journals and that new research is still in progress, as well as research that may have turned towards related or more specialized emerging subjects, such as cybersecurity, and artificial intelligence applied to public services.

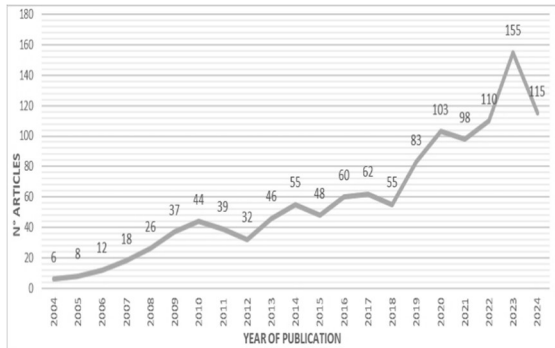


Figure 4: Trend in the Number of Articles Retrieved from Biblioshiny

### 4.3 Ranking of the 5 most prolific international authors in the research field

Figure 5 displays the most prolific authors in public-sector digital transformation and e-government, ranked by publication count. At the top of the list, Mensah I. with 16 publications, followed by Lee J. with 15 and Sensuse D. with 13. These researchers are among the main actors in e-government and digital transformation research, making significant contributions through the quantity of their work. In addition, Dwivedi Y. stands out not only for his 10 publications but also for a high academic impact 822 citations in 2019 making him the most cited author among those listed. Similarly, Gil-Garcia J., another key contributor with 10 publications, reached 692 citations in 2006, highlighting the importance of his work in this research field.

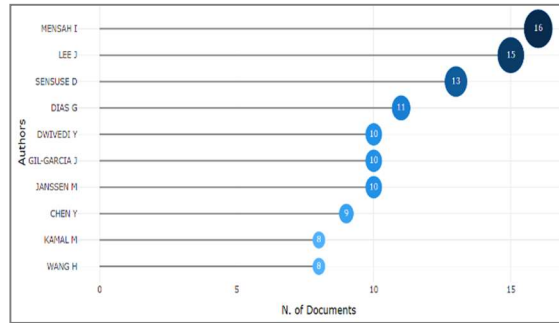


Figure 5: Trend in the Number of Articles Retrieved from Biblioshiny

### 4.4 Evolution of scientific output and international collaboration networks of the leading countries over the period 2004-2024

The table below highlights the five most prolific countries in this research domain from 2004 to 2024. The United States emerges as the top contributor, with over 158 articles published in 2024, confirming its leading position in this field of research. China and the United Kingdom follow in second and third positions, also demonstrating a strong involvement in the field, while Indonesia and Malaysia also show an increase in their scientific contributions.

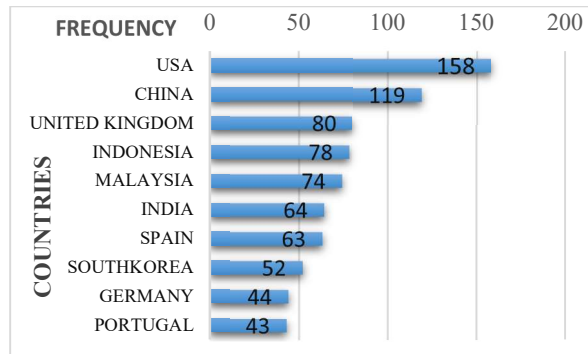


Figure 6: Scientific Production of the Top 10 Countries by Publication Volume (2004–2024)

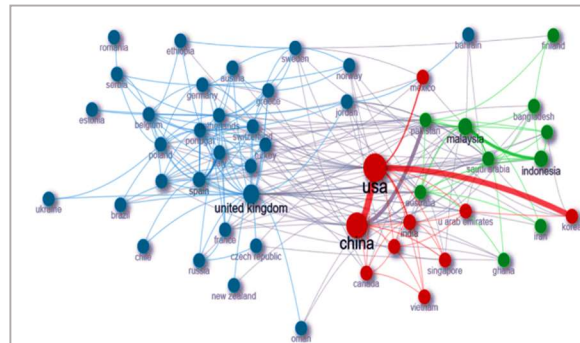


Figure 7: International Collaboration Network Among Leading Countries in the Research Field.



		Service Functionality in Malaysian Electronic Government					
2	[23]	E-government success factors: Mapping practical tools to theoretical foundations	Article	United States	Qualitative	Government Information Quarterly	692
3	[11]	Critical Success Factors of E-Government: A Proposed Model for E-Government Implementation	Conference paper	United Kingdom	Qualitative	2006 Innovations in Information Technology, IIT, 4085489	74
4	[24]	A Formal Model for Electronic and Mobile Government Service Delivery Success Factors	Conference paper	Australia Indonesia	Qualitative	Australasian Conference on Information Systems	1
5	[25]	Critical Success Factors on E-Government Application: From the View of Government Workers in Guangdong	Conference paper	Macau	Quantitative	Proceedings of the International Conference on Electronic Business (ICEB), pp. 271–279	1
6	[10]	New Service Development in E-government: Identifying Critical Success Factors	Article	United Kingdom Greece	Qualitative	Transforming Government: People, Process and Policy	60
7	[26]	An Investigation into Critical Determinants of E-Government Implementation in the Context of a Developing Nation	Conference paper	Australia	Quantitative	Lecture Notes in Computer Science , 6267 LNCS, pp. 9–21	11
8	[27]	E-Participation Initiatives in Europe: Learning from Practitioners	Conference paper	Greece	Quantitative	Lecture Notes in Computer Science , 6229 LNCS, pp. 54–65	49
9	[28]	Validating IS Success Factors: An Empirical Study on Web-Based State or Local E-Government Systems	Conference paper	United States	Quantitative	16th Americas Conference on Information Systems 2010, AMCIS 2010, 7, pp. 4719–4730	5
10	[29]	Chinese Citizens'	Article	United States	Quantitative	Electronic Government,	16

		Opinions on E-Government Benefits, Issues, and Critical Success Factors					
11	[30]	Citizen Relationship Management Critical Success Factors: An Empirical Study of Municipality of Tehran	Article	Iran	Mixte	International Journal of Electronic Governance	5
12	[31]	Effective Governance in E-Government	Article	Singapore Malaysia	Qualitative	International Journal of Business Excellence	2
13	[32]	Adopting New Approaches for Public Procurement Efficiency: Critical Success Factors (CSFs) for the Implementation of e-Procurement in Uganda's Public Sector	Article	Norway Uganda	Quantitative	International Journal of Procurement Management	13
14	[2]	E-Government Adoption Research: Analysing Challenges and Critical Success Factors	Conference paper	United Kingdom	Qualitative	Proceedings of the European, Mediterranean and Middle Eastern Conference on Information Systems, EMCIS 2012, pp. 103–117	4
15	[33]	Innovation: A Factor Explaining E-Government Success in Estonia	Article	Estonia	Qualitative	Electronic Government	65
16	[34]	Synthesizing Success Factors for E-Government Initiative	Article	Indonesia	Qualitative	Research Journal of Applied Sciences, Engineering and Technology	15
17	[35]	Determinants of User Adoption of E-Government Services in Greece and the Role of Citizen Service Centres	Conference paper	Greece	Quantitative	Procedia Technology	48
18	[5]	Success factors influencing implementation of e-government at different	Article	Denmark	Qualitative	International Journal of Electronic Governance	42

		stages of maturity					
19	[36]	An Exploration of Critical Success Factors for e-Governance Project Initiation: A Preliminary Framework	Conference paper	Ghana South Africa	Qualitative	IST-Africa Conference, IST-Africa 2015, 7190547	9
20	[37]	Citizen-Centric Critical Success Factors for the Implementation of E-government	Conference paper	Kenya	Mixte	2015 IST-Africa Conference, IST-Africa 2015, 7190525	13
21	[38]	Key Success Factors of E-Government Projects: Jordanians' Perceptions	Article	Jordan	Quantitative	International Journal of Information Technology Project Management	2
22	[39]	Determinants of E-Government Diffusion in Nigeria: An Examination of Theoretical Models	Article	Kazakhstan	Quantitative	Information Development	11
23	[40]	Critical Success Factors Affecting E-Government Policy Implementation in Pakistan	Article	South Korea	Mixte	Journal of e-Democracy and Open Government (JeDEM)	13
24	[41]	An Initial Approach to E-Government Acceptance and Use: A Literature Analysis of E-Government Acceptance Determinants	Conference paper	Portugal	Qualitative	Iberian Conference on Information Systems and Technologies, CISTI, 7976044	10
25	[42]	Critical Success Factors of E-Government Implementation Based on Meta-Ethnography	Conference paper	Indonesia	Qualitative	2017 5th International Conference on Cyber and IT Service Management, CITSM 2017	5
26	[8]	Systematic Review of Critical Success Factors of E-Government: Definition and Realization	Conference paper	Indonesia	Qualitative	Proceedings - 2017 International Conference on Sustainable Information Engineering and Technology, SIET	6

						2017, 2018-January, pp. 190–195	
27	[43]	Inhibitors of E-Government Adoption: Determinants of Habit and Adoption Intentions	Article	Spain	Qualitative	Journal of Innovation & Knowledge	18
28	[44]	The Critical Success Factors Model for E-Government Implementation in Indonesia	Conference paper	Indonesia	Qualitative	2017 5th International Conference on Information and Communication Technology, ICoIC7 2017, 8074711	13
29	[45]	Critical Success Factors for Information Systems Development: A Case Study in e-Government	Conference paper	Indonesia	Mixte	ACM International Conference Proceeding Series, pp. 29–33	11
30	[46]	Critical Success Factors and Key Performance Indicators for E-Government Projects: Towards Untethered Public Services	Conference paper	Ethiopia	Quantitative	Lecture Notes of the Institute for Computer Sciences, Social-Informatics and Telecommunications Engineering, LNICST , 244, pp. 246–258	0
31	[47]	Cross-boundary e-government systems: Determinants of performance	Article	United States Taiwan	Quantitative	Government Information Quarterly	61
32	[48]	The Critical Success Factors for e-Government Implementation in South Africa's Local Government	Conference paper	South Africa	Quantitative	2019 IEEE 2nd International Conference on Information and Computer Technologies, ICICT 2019, pp. 220–228, 8710930	5
33	[49]	Determinants of Intention to Adopt E-Government Services in Pakistan: An Imperative for Sustainable Development	Article	Malaysia	Quantitative	Resources	71
34	[50]	Evaluation of an eParticipation Project Against eParticipation Success Factors	Conference paper	Switzerland	Qualitative	Communications in Computer and Information Science , 947, pp. 295–307	1
35	[6]	An e-Government	Conference paper	South Africa	Quantitative	Lecture Notes in Computer Science	11

		Implementation Framework: A Developing Country Case Study				, 12067 LNCS, pp. 15–27	
36	[51]	E-Government Implementation Challenges in Small Countries: The Project Manager's Perspective	Article	Cyprus France Italy	Qualitative	Technological Forecasting & Social Change	100
37	[52]	Stages and Determinants of E-Government Development: A Twelve-Year Longitudinal Study of Global Cities	Article	United States Austria Netherlands	Quantitative	International Public Management Journal	53
38	[53]	A Retrospective Analysis of the Role of Soft Factors in Digitalization Projects: Based on a Case Study in a Public Health Organization in Trondheim, Norway	Conference paper	Norway Germany	Qualitative	2020 IEEE European Technology and Engineering Management Summit, E-TEMS 2020, 9111790	6
39	[54]	Finding Preeminence: A Systematic Literature Review of E-Service Success Factors	Conference paper	Indonesia	Qualitative	2020 5th International Conference on Informatics and Computing, ICIC 2020, 9288525	1
40	[55]	Determinants for Successful Digital Transformation	Article	South Korea	Quantitative	Sustainability	17
41	[56]	Examining the antecedents and outcomes of smart government usage: An integrated model	Article	United Arab Emirates Jordan	Quantitative	Government Information Quarterly	32
42	[57]	IT Alignment: A Path Towards Digital Transformation Success	Conference paper	Sweden Ethiopia	Mixed	Procedia Computer Science , 219, pp. 471–478	1
43	[14]	Critical Success Factors and Challenges in Adopting Digital Transformation in the Saudi	Article	Saudi Arabia United Kingdom	Qualitative	Sustainability	2

		Ministry of Education					
44	[3]	Identifying the Determinants of Platform-Based E-Government Service Use	Article	South Korea	Quantitative	Journal of Global Information Management	3

Table 3: Summary of key success factors identified in the 44 articles

Category	Sub-category	Frequency	N° of Document
Organizational	Process Optimization	10	1 ; 3 ; 11 ; 12 ; 13 ; 16 ; 25 ; 26 ; 27 ; 29
	Standard Operating Procedures (SOPs)	2	1 ; 28
	Project Management, Monitoring, and Evaluation	9	8 ; 16 ; 18 ; 21 ; 25 ; 26 ; 28 ; 29 ; 34
	Organizational Culture and Structure	16	3 ; 4 ; 6 ; 7 ; 8 ; 11 ; 13 ; 16 ; 25 ; 26 ; 27 ; 28 ; 31 ; 34 ; 42 ; 43
	Change Management	17	2 ; 3 ; 8 ; 11 ; 16 ; 18 ; 19 ; 20 ; 21 ; 25 ; 26 ; 27 ; 34 ; 35 ; 36 ; 42 ; 43
	Coordination and Communication	16	1 ; 3 ; 4 ; 5 ; 6 ; 10 ; 13 ; 16 ; 23 ; 25 ; 26 ; 29 ; 35 ; 36 ; 38 ; 42
Humain	ICT Skills and Digital Literacy	20	1 ; 2 ; 4 ; 6 ; 7 ; 13 ; 18 ; 20 ; 21 ; 22 ; 23 ; 25 ; 26 ; 28 ; 29 ; 32 ; 35 ; 37 ; 38 ; 40
	Stakeholder Engagement, Motivation, and Involvement	22	1 ; 2 ; 4 ; 8 ; 12 ; 13 ; 16 ; 18 ; 19 ; 21 ; 23 ; 25 ; 26 ; 28 ; 31 ; 33 ; 34 ; 35 ; 38 ; 40 ; 42 ; 43
	Ongoing Training and Skills Development	14	3 ; 4 ; 13 ; 16 ; 18 ; 21 ; 25 ; 26 ; 32 ; 34 ; 35 ; 36 ; 38 ; 42
	Reward Systems and Motivation	4	3 ; 4 ; 25 ; 38
Technological	ICT Infrastructure and Accessibility	30	1 ; 3 ; 4 ; 6 ; 7 ; 8 ; 10 ; 11 ; 12 ; 14 ; 15 ; 16 ; 18 ; 19 ; 20 ; 21 ; 22 ; 23 ; 24 ; 25 ; 26 ; 28 ; 30 ; 32 ; 33 ; 35 ; 36 ; 39 ; 41 ; 43
	Security, Confidentiality, and Risk Management	27	1 ; 2 ; 3 ; 5 ; 6 ; 7 ; 8 ; 10 ; 12 ; 13 ; 14 ; 16 ; 17 ; 18 ; 20 ; 21 ; 22 ; 23 ; 24 ; 25 ; 26 ; 27 ; 33 ; 34 ; 36 ; 39 ; 40
	System, Information, and Service Quality; Usability and Reliability (Ease and Speed of Use)	28	2 ; 3 ; 4 ; 5 ; 8 ; 9 ; 10 ; 14 ; 16 ; 17 ; 18 ; 20 ; 21 ; 22 ; 23 ; 24 ; 25 ; 26 ; 27 ; 28 ; 30 ; 31 ; 32 ; 33 ; 39 ; 41 ; 43 ; 44
	Technological Flexibility, Compatibility, and Integration	15	1 ; 2 ; 5 ; 8 ; 12 ; 16 ; 22 ; 24 ; 25 ; 26 ; 27 ; 34 ; 36 ; 41 ; 43
	IT Standards and System Collaboration	2	3 ; 28
Innovation and Sustainability	Innovation and Continuous Improvement	9	8 ; 15 ; 18 ; 26 ; 31 ; 32 ; 34 ; 37 ; 40
	Service Personalization	3	34 ; 39 ; 41
	User Retention and Satisfaction	5	3 ; 14 ; 25 ; 26 ; 44
	Relative and Competitive Advantage – Perceived Usefulness	11	3 ; 14 ; 17 ; 22 ; 24 ; 25 ; 26 ; 33 ; 40 ; 41 ; 44
Governance and Political	Leadership and Strategic Governance	32	2 ; 3 ; 4 ; 5 ; 6 ; 7 ; 8 ; 10 ; 11 ; 12 ; 13 ; 14 ; 15 ; 16 ; 18 ; 19 ; 20 ; 21 ; 23 ; 25 ; 26 ; 27 ; 28 ; 29 ; 31 ; 34 ; 35 ; 36 ; 37 ; 38 ; 42 ; 43
	Regulatory and Legal Framework	18	2 ; 3 ; 6 ; 7 ; 8 ; 13 ; 14 ; 15 ; 16 ; 18 ; 19 ; 21 ; 25 ; 26 ; 28 ; 34 ; 35 ; 36
	Public-Private Partnerships and International Cooperation	6	1 ; 2 ; 12 ; 15 ; 16 ; 25
	Interinstitutional Collaboration	13	1 ; 2 ; 3 ; 4 ; 10 ; 12 ; 16 ; 18 ; 21 ; 25 ; 26 ; 31 ; 42
	Financial Resources and Business Models	20	2 ; 3 ; 5 ; 6 ; 7 ; 12 ; 15 ; 16 ; 18 ; 20 ; 23 ; 25 ; 26 ; 27 ; 33 ; 34 ; 35 ; 36 ; 37 ; 43

	Supplier Partnership and Collaboration	4	1 ; 13 ; 42 ; 43
Socio-cultural, and Environmental	Communication and Awareness Strategy	17	3 ; 7 ; 8 ; 12 ; 16 ; 18 ; 19 ; 20 ; 21 ; 25 ; 26 ; 27 ; 30 ; 34 ; 35 ; 36 ; 40
	Social Inclusion and Citizen Trust	24	1 ; 5 ; 6 ; 7 ; 10 ; 11 ; 12 ; 14 ; 16 ; 17 ; 18 ; 20 ; 21 ; 22 ; 23 ; 24 ; 25 ; 26 ; 27 ; 33 ; 34 ; 35 ; 37 ; 38
	Knowledge Management	4	11 ; 25 ; 26 ; 29
	Social Influence and Subjective Norms	6	17 ; 18 ; 24 ; 26 ; 33 ; 41

**5. DISCUSSION**

As mentioned earlier that until now has been a lot of research done about CSF implementation of e-Government but the overall CSF are still scattered in various journal articles and conference and not give the whole picture [42]. In the present study, Table 3 highlights the factors most frequently mentioned in the literature on the digital transformation of public services, suggesting a significant impact on e-government initiatives. The analysis of articles gathered in this study covers contributions from over 33 countries, with a predominance of publications from Indonesia (7 articles), the United Kingdom (5 articles) and the United States (5 articles), these countries being among the main contributors in the database analysed. Methodologically, most studies (22 out of 44) employed qualitative approaches, followed by quantitative methods (19 studies), while some combined both. The results of the studies analysed show that the implementation and adoption of digital transformation initiatives for public services, particularly in the context of e-government, rely on a combination of key factors, classified into six essential categories: organizational, technological, human, governance and political, Innovation and Sustainability, socio-cultural, and environmental.

Furthermore, an in-depth analysis has highlighted five factors influencing the implementation and success of the digital transformation of public services, as illustrated in Table 3. These factors are regularly mentioned in scientific literature, and are supported by various conceptual models and theoretical frameworks.

Leadership and strategic governance emerge as key factors in driving digital transformation, relying on visionary leadership and a project manager able to manage the demands of change [17]. Strong managerial support thus helps to guide and sustain the necessary organizational restructuring [25]. Having strong leadership is the first step to successful digitization initiatives [58], making this

factor the main lever for driving organizational change.

The second factor, ICT infrastructure and accessibility: IT Infrastructure, as a CSF, is the backbone of e-Gov initiation [59]. Technology infrastructure is important, as insufficient infrastructure means failed implementation [5]. This key factor aims to ensure the availability of suitable technologies, equitable accessibility and favourable conditions for effective digital transformation. However, it is often constrained by budget limitations and a lack of necessary expertise for system management and maintenance The next key factor involves system, information, and service quality, as well as usability and reliability: the performance and effectiveness of all areas of information systems are predicted by the dimensions of information, system and service quality, which independently or in combination influence use, user satisfaction and net benefits [3]. Information quality includes both accuracy and completeness in the context of performing administrative tasks. Information system quality refers to ease of use in performing administrative tasks. Service quality refers to the quality of service provided to users of the information system in question [47], [60]. Consequently, this factor plays a central role in the user experience and is a decisive determinant of successful digital transformation. Fourth, security, confidentiality and risk management are a fundamental pillar in building and maintaining public trust. Government, which collects personal data, has a responsibility to protect it and maintain confidentiality in accordance with regulatory standards [37]. Safeguarding information and systems against unauthorised disclosure, alteration, or access is thus indispensable for legitimizing digital transformation efforts. Finally, social inclusion and citizen trust: trust determines whether or not users will choose to receive services via the INTERNET [26] shaped by shared experiences and various other factors. This element is essential for bridging the digital divide and fostering citizens' acceptance and engagement with change.

While these five factors recur with regularity across diverse studies, it is evident that they interact in complex ways [32], [61]. Leadership, for example, can heavily influence resource allocation for infrastructure development, whereas well-crafted security policies and user-friendly system designs can help boost citizen trust [30], [42]. At the same time, robust ICT infrastructure alone does not guarantee success if the targeted population lacks adequate digital literacy or if the services offered do not match citizens' actual needs [40], [62]. Hence, understanding these interdependencies is key to formulating a coherent and adaptive digital transformation roadmap.

Across the studies reviewed, several predominant models and theoretical frameworks explain the adoption and implementation of digital technologies in the public sector. These include the Technology Acceptance Model (TAM), the Unified Theory of Acceptance and Use of Technology (UTAUT) and UTAUT2, the Diffusion of Innovations Theory (DOI), the Innovation Diffusion Theory (IDT), the Technology–Organization–Environment Framework (TOE), the Extended Theory of Planned Behavior (ETPB), and Social Cognitive Theory (SCT).

### 5.1 Limitations and Future Research Directions

This study provides a structured synthesis of key success factors (CSFs) for the adoption of digital public services; nevertheless, significant limitations should be recognised. The review's focus was confined to publications indexed in Scopus and Web of Science, potentially omitting pertinent contributions from alternative databases or non-English sources. The bibliometric approach primarily concentrated on term co-occurrence and excluded full-text analysis, which may restrict the depth of thematic extraction. Third, the heterogeneity of the included studies differing in methodological techniques, geographical contexts, and sectoral focuses may have resulted in discrepancies in the emphasis or interpretation of specific CSFs.

Future research should focus on recording and analysing implementation pathways, elucidating how specific elements operate, and under which conditions they facilitate successful digital transformation. This applied research would offer practical guidance for public sector entities seeking to convert strategic enablers into effective practices.

## 6. CONCLUSIONS

This systematic review makes a significant contribution to research on the digital transformation of public services, providing practical implications for public-sector stakeholders by offering a comprehensive overview of the success factors identified in the existing literature. The objective of this study is to identify and synthesise the critical success factors for public service digitization. The findings reveal 29 key factors, grouped into six major categories: organizational, technological, human, governance and political, Innovation and Sustainability, socio-cultural, and environmental. Among the most frequently cited determinants are leadership and strategic governance, information and communication technology (ICT) infrastructure and accessibility, as well as the quality of systems, information and services, including their usability and reliability, security, privacy, risk management, and finally social inclusion and citizen trust. For effective implementation of digital public services, governments must grasp the needs, expectations, and challenges citizens face when using such services. These efforts could provide valuable insights into contextual factors influencing project success and help define best practices. The findings of this research are particularly useful for guiding governments in developing countries in formulating informed strategies that foster the successful deployment of digital services, thereby supporting inclusive and sustainable digital development.

## REFERENCES

- [1] J. R. Gil-Garcia, N. C. Helbig, et E. Ferro, « Is it only about Internet access? An empirical test of a multi-dimensional digital divide », *Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics)*, vol. 4084 LNCS. Springer Verlag, p. 139-149, 2006. doi: 10.1007/11823100\_13.
- [2] N. P. Rana, Y. K. Dwivedi, et M. D. Williams, « E-government adoption research: Analysing challenges and critical success factors », *Proceedings of the European, Mediterranean and Middle Eastern Conference on Information Systems, EMCIS 2012*. Brunel University London Press, p. 103-117, 2012. [En ligne]. Disponible sur: <https://www.scopus.com/inward/record.uri?eid=2-s2.0->

- 84962696689&partnerID=40&md5=4c75bf174744cdb217735630b06b07d3
- [3] H. Nam, T. Nam, et S. Kim, « Identifying the Determinants of Platform-Based E-Government Service Use », *J. Glob. Inf. Manag.*, vol. 32, n° 1, p. 336554, 2024, doi: 10.4018/JGIM.336554.
- [4] F. Bannister et R. Connolly, « The great theory hunt: Does e-government really have a problem? », *Government Information Quarterly*, vol. 32, n° 1, p. 1-11, janv. 2015, doi: 10.1016/j.giq.2014.10.003.
- [5] S. D. Müller et S. A. Skau, « Success factors influencing implementation of e-government at different stages of maturity: A literature review », *International Journal of Electronic Governance*, vol. 7, n° 2. Inderscience Enterprises Ltd., p. 136-170, 2015. doi: 10.1504/IJEG.2015.069495.
- [6] A. Apleni et H. Smuts, « An e-Government Implementation Framework: A Developing Country Case Study », *Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics)*, vol. 12067 LNCS. Springer, p. 15-27, 2020. doi: 10.1007/978-3-030-45002-1\_2.
- [7] O. D. Sarikas et V. Weerakkody, « Realising integrated e-government services: a UK local government perspective », *Transforming Government: People, Process and Policy*, vol. 1, n° 2, p. 153-173, janv. 2007, doi: 10.1108/17506160710751986.
- [8] R. Meiyanti *et al.*, « Systematic Review of Critical Success Factors of E-Government: Definition and Realization », in *2017 INTERNATIONAL CONFERENCE ON SUSTAINABLE INFORMATION ENGINEERING AND TECHNOLOGY (SIET)*, New York: IEEE, 2017, p. 190-195.
- [9] S. K. Vaezi, « Critical Success Factors for implementing knowledge based models for Electronic Public Services (EPS) », *ACM International Conference Proceeding Series*, vol. 351. p. 471-473, 2008. doi: 10.1145/1509096.1509198.
- [10] S. Angelopoulos, F. Kitsios, et T. Papadopoulos, « New service development in e-government: identifying critical success factors », *Transform. Gov.-People Process Policy*, vol. 4, n° 1, p. 95-118, 2010, doi: 10.1108/17506161011028821.
- [11] T. Altameem, M. Zairi, et S. Alshawi, « Critical success factors of E-government: A proposed model for E-government implementation », in *2006 INNOVATIONS IN INFORMATION TECHNOLOGY*, New York: IEEE, 2006, p. 501-505.
- [12] G. M. Jonathan, « Digital transformation in the public sector: Identifying critical success factors », *Lecture Notes in Business Information Processing*, vol. 381 LNBIP. Springer, p. 223-235, 2020. doi: 10.1007/978-3-030-44322-1\_17.
- [13] A. Aras et G. Büyüközkan, « Digital Transformation Journey Guidance: A Holistic Digital Maturity Model Based on a Systematic Literature Review », *Systems*, vol. 11, n° 4. MDPI, 2023. doi: 10.3390/systems11040213.
- [14] M. Alojail, J. Alshehri, et S. B. Khan, « Critical Success Factors and Challenges in Adopting Digital Transformation in the Saudi Ministry of Education », *Sustainability*, vol. 15, n° 21, p. 15492, nov. 2023, doi: 10.3390/su152115492.
- [15] R. Sandoval-Almazan et J. R. Gil-Garcia, « Are government internet portals evolving towards more interaction, participation, and collaboration? Revisiting the rhetoric of e-government among municipalities », *Government Information Quarterly*, vol. 29, p. S72-S81, janv. 2012, doi: 10.1016/j.giq.2011.09.004.
- [16] Z. Ebrahim et Z. Irani, « E-government adoption: architecture and barriers », *Business Process Management Journal*, vol. 11, n° 5, p. 589-611, janv. 2005, doi: 10.1108/14637150510619902.
- [17] E. A. Abu-Shanab, « E-government familiarity influence on Jordanians' perceptions », *Telemat. Inform.*, vol. 34, n° 1, p. 103-113, févr. 2017, doi: 10.1016/j.tele.2016.05.001.
- [18] J. F. Rockart et C. V. Bullen, « Using critical success factors in setting information technology and general management resource priorities », in *Planning for information systems*, 2015, p. 111-122.
- [19] G. V. Pedrosa, R. A. D. Kosloski, V. G. D. Menezes, G. Y. Iwama, W. C. M. P. D. Silva, et R. M. D. C. Figueiredo, « A Systematic Review of Indicators for Evaluating the Effectiveness of Digital Public Services », *Information*, vol. 11, n° 10, p. 472, oct. 2020, doi: 10.3390/info11100472.
- [20] M. Aria et C. Cuccurullo, « bibliometrix : An R-tool for comprehensive science mapping analysis », *Journal of Informetrics*, vol. 11, n° 4, p. 959-975, nov. 2017, doi: 10.1016/j.joi.2017.08.007.

- [21] George W. Noblit, R. Dwight Hare, « Meta-Ethnography: Synthesizing Qualitative Studies - George W. Noblit, R. Dwight Hare - Google Livres ». Consulté le: 9 décembre 2024. [En ligne]. Disponible sur: <https://books.google.fr/books?hl=fr&lr=&id=fQQb4FP4NSgC&oi=fnd&pg=PA5&dq=No+blit,+G.W.,+%26+Hare,+R.D.+1988.+Meta-ethnography:+synthesizing+qualitative+studies.+SAGE+Publications,+Inc.,+London.&ots=MX2Ewf3Na&sig=C-pNKj6xYPUszdfKymzVyd8UeVo#v=onepage&q&f=false>
- [22] T. Wood-Harper, O. Ibrahim, et N. Ithnin, « An interconnected success factor approach for service functional in Malaysian electronic government », *ACM International Conference Proceeding Series*, vol. 60. p. 446-450, 2004. doi: 10.1145/1052220.1052277.
- [23] J. R. Gil-García et T. A. Pardo, « E-government success factors: Mapping practical tools to theoretical foundations », *Government Information Quarterly*, vol. 22, n° 2. Elsevier Ltd, p. 187-216, 2005. doi: 10.1016/j.giq.2005.02.001.
- [24] G. Gunadi et G. A. Sandy, « A formal model for electronic and mobile government service delivery success factors », *12th Australian Conference on Knowledge Management and Intelligent Decision Support, ACKMIDS 09 and 20th Australasian Conference on Information Systems, ACIS 2009*. p. 682-690, 2009. [En ligne]. Disponible sur: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-79955164566&partnerID=40&md5=01a1c1a576967c18776a460a25a374f8>
- [25] A. N. Chen et Y. Chen, « Critical success factors on E-Government Application-from the view of government workers in Guangdong », *Proceedings of the International Conference on Electronic Business (ICEB)*. p. 271-279, 2009. [En ligne]. Disponible sur: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-84873536701&partnerID=40&md5=4b3f0ad461ddb2f1d9ba3f27d47dc7e>
- [26] N. Rashid et S. Rahman, « An Investigation into Critical Determinants of e-Government Implementation in the Context of a Developing Nation », in *ELECTRONIC GOVERNMENT AND THE INFORMATION SYSTEMS PERSPECTIVE*, K. M. Andersen, E. Francesconi, A. Gronlund, et T. M. VanEngers, Éd., in *Lecture Notes in Computer Science*, vol. 6267. Berlin: Springer-Verlag Berlin, 2010, p. 9-+.
- [27] E. Panopoulou, E. Tambouris, et K. Tarabanis, « EParticipation initiatives in Europe: Learning from practitioners », *Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics)*, vol. 6229 LNCS. p. 54-65, 2010. doi: 10.1007/978-3-642-15158-3\_5.
- [28] C. Song, « Validating IS Success Factors: An Empirical Study on Web-based State or Local E-government Systems », in *AMCIS 2010 PROCEEDINGS*, Atlanta: Assoc Information Systems, 2010.
- [29] Y. J. Zhang et C.-T. Hsieh, « Chinese citizens? Opinions on e-government benefits, issues and critical success factors », *Electronic Government*, vol. 7, n° 2. Inderscience Publishers, p. 137-147, 2010. doi: 10.1504/EG.2010.030924.
- [30] A. Keramati, M. S. Saremi, et M. A. Mofrad, « Citizen Relationship Management Critical Success Factors: an empirical study of Municipality of Tehran », *Int. J. Electron. Governance*, vol. 4, n° 4, p. 322-347, 2011, doi: 10.1504/ijeg.2011.046007.
- [31] A. Seetharaman, E. Srejayashree, G. Marthandan, et P. Balasubramaniam, « Effective governance in e-government », *International Journal of Business Excellence*, vol. 4, n° 4. Inderscience Publishers, p. 371-384, 2011. doi: 10.1504/IJBEX.2011.041057.
- [32] B. C. Basheka, P. N. Oluca, et G. Mugurusi, « Adopting new approaches for public procurement efficiency: Critical success factors (CSFs) for the implementation of e-procurement in Uganda's public sector », *International Journal of Procurement Management*, vol. 5, n° 6. Inderscience Publishers, p. 712-732, 2012. doi: 10.1504/IJPM.2012.049711.
- [33] T. Kalvet, « Innovation: A factor explaining e-government success in Estonia », *Electronic Government*, vol. 9, n° 2. Inderscience Publishers, p. 142-157, 2012. doi: 10.1504/EG.2012.046266.
- [34] A. Ramadhan, D. I. Senses, Muladno, et A. M. Arymurthy, « Synthesizing success factors for e-government initiative », *Research Journal of Applied Sciences, Engineering and Technology*, vol. 6, n° 9. Maxwell Science

- Publications, p. 1685-1702, 2013. doi: 10.19026/rjaset.6.3891.
- [35] A. Voutinioti, « Determinants of User Adoption of e-Government Services in Greece and the role of Citizen Service Centres », in *6TH INTERNATIONAL CONFERENCE ON INFORMATION AND COMMUNICATION TECHNOLOGIES IN AGRICULTURE, FOOD AND ENVIRONMENT (HAICTA 2013)*, M. Salampasis et A. Theodoridis, Éd., in *Procedia Technology*, vol. 8. Amsterdam: Elsevier Science Bv, 2013, p. 238-244. doi: 10.1016/j.protcy.2013.11.033.
- [36] S. Hatsu et E. Ketcha Ngassam, « An exploration of critical success factors for e-Governance project initiation: A preliminary framework », *2015 IST-Africa Conference, IST-Africa 2015*. Institute of Electrical and Electronics Engineers Inc., 2015. doi: 10.1109/ISTAFRICA.2015.7190547.
- [37] I. Otieno, E. Omwenga, et Ieee, « Citizen-Centric Critical Success Factors for the Implementation of E-government: A Case Study of Kenya Huduma Centres », présenté à 2015 IST-AFRICA CONFERENCE, 2015.
- [38] E. Abu-Shanab et L. Q. Bataineh, « Key Success Factors of E-Government Projects: Jordanians' Perceptions », *Int. J. Inf. Technol. Proj. Manag.*, vol. 7, n° 1, p. 32-46, mars 2016, doi: 10.4018/IJITPM.2016010103.
- [39] F. Amagoh, « Determinants of e-government diffusion in Nigeria: An examination of theoretical models », *Inf. Dev.*, vol. 32, n° 4, p. 1137-1154, sept. 2016, doi: 10.1177/0266666915593330.
- [40] W. Siddique, « Critical success factors affecting e-government policy implementation in pakistan », *eJournal of eDemocracy and Open Government*, vol. 8, n° 1. Department for E-Governance and Administration, p. 102-126, 2016. doi: 10.29379/jedem.v8i1.398.
- [41] S. Nunes, J. Martins, F. Branco, R. Goncalves, et M. Au-Yong-Oliveira, « An Initial Approach to e-Government Acceptance and Use A literature analysis of e-Government acceptance determinants », in *2017 12TH IBERIAN CONFERENCE ON INFORMATION SYSTEMS AND TECHNOLOGIES (CISTI)*, in *Iberian Conference on Information Systems and Technologies*. New York: IEEE, 2017.
- [42] D. Napitupulu, « A conceptual model of e-Government adoption in Indonesia », *International Journal on Advanced Science, Engineering and Information Technology*, vol. 7, n° 4. Insight Society, p. 1471-1478, 2017. doi: 10.18517/ijaset.7.4.2518.
- [43] M. Rey-Moreno et C. Medina-Molina, « Inhibitors of e-Government adoption: Determinants of habit and adoption intentions », *J. Innov. Knowl.*, vol. 2, n° 3, p. 172-180, déc. 2017, doi: 10.1016/j.jik.2017.01.001.
- [44] G. Soni Fajar Surya et A. Amalia, « The critical success factors model for e-Government implementation in Indonesia », *2017 5th International Conference on Information and Communication Technology, ICoICT 2017*. Institute of Electrical and Electronics Engineers Inc., 2017. doi: 10.1109/ICoICT.2017.8074711.
- [45] M. Guntur, B. Purwandari, T. Raharjo, I. Solichah, et L. Kumaralalita, « Critical Success Factors for Information Systems Development: A Case Study in e-Government », in *2018 2ND INTERNATIONAL CONFERENCE ON BUSINESS AND INFORMATION MANAGEMENT (ICBIM 2018)*, New York: Assoc Computing Machinery, 2018, p. 29-33. doi: 10.1145/3278252.3278288.
- [46] D. M. Yehuala, « Critical success factors and key performance indicators for e-government projects- Towards untethered public services: The case of Ethiopia », *Lecture Notes of the Institute for Computer Sciences, Social-Informatics and Telecommunications Engineering, LNICST*, vol. 244. Springer Verlag, p. 246-258, 2018. doi: 10.1007/978-3-319-95153-9\_24.
- [47] Y.-C. Chen, L.-T. Hu, K.-C. Tseng, W.-J. Juang, et C.-K. Chang, « Cross-boundary e-government systems: Determinants of performance », *Gov. Inf. Q.*, vol. 36, n° 3, p. 449-459, juill. 2019, doi: 10.1016/j.giq.2019.02.001.
- [48] M. Masinde, M. Mkhonto, et Ieee, « The Critical Success Factors for e-Government Implementation in South Africa's Local government: Factoring in Apartheid Digital Divide », présenté à 2019 IEEE 2ND INTERNATIONAL CONFERENCE ON INFORMATION AND COMPUTER TECHNOLOGIES (ICICT), 2019.
- [49] H. Zahid et B. H. Din, « Determinants of Intention to Adopt E-Government Services in Pakistan: An Imperative for Sustainable Development », *Resources-Basel*, vol. 8, n° 3,

- p. 128, sept. 2019, doi: 10.3390/resources8030128.
- [50] H.-D. Zimmermann, « Evaluation of an eParticipation Project Against eParticipation Success Factors », *Communications in Computer and Information Science*, vol. 947. Springer Verlag, p. 295-307, 2019. doi: 10.1007/978-3-030-13283-5\_22.
- [51] L. Glyptis, M. Christofi, D. Vrontis, M. Del Giudice, S. Dimitriou, et P. Michael, « E-Government implementation challenges in small countries: The project manager's perspective », *Technol. Forecast. Soc. Chang.*, vol. 152, p. 119880, mars 2020, doi: 10.1016/j.techfore.2019.119880.
- [52] A. Ingrams, A. Manoharan, L. Schmidhuber, et M. Holzer, « Stages and Determinants of E-Government Development: A Twelve-Year Longitudinal Study of Global Cities », *Int. Public Manag. J.*, vol. 23, n° 6, p. 731-769, déc. 2020, doi: 10.1080/10967494.2018.1467987.
- [53] B. Ngereja, B. Hussein, K. H. J. Hafsel, et C. Wolff, « A Retrospective Analysis of the Role of Soft Factors in Digitalization Projects: Based on a Case Study in a Public Health Organization in Trondheim-Norway », *2020 IEEE European Technology and Engineering Management Summit, E-TEMS 2020*. Institute of Electrical and Electronics Engineers Inc., 2020. doi: 10.1109/E-TEMS46250.2020.9111790.
- [54] A. Syahrizal, A. Arief, et D. Indra Sensuse, « Finding preeminence: A systematic literature review of e-service success factors », *2020 5th International Conference on Informatics and Computing, ICIC 2020*. Institute of Electrical and Electronics Engineers Inc., 2020. doi: 10.1109/ICIC50835.2020.9288525.
- [55] K. Oh, H. Kho, Y. Choi, et S. Lee, « Determinants for Successful Digital Transformation », *Sustainability (Switzerland)*, vol. 14, n° 3. MDPI, 2022. doi: 10.3390/su14031215.
- [56] O. Hujran, M. M. Al-Debei, A. S. Al-Adwan, A. Alarabiat, et N. Altarawneh, « Examining the antecedents and outcomes of smart government usage: An integrated model », *Gov. Inf. Q.*, vol. 40, n° 1, p. 101783, janv. 2023, doi: 10.1016/j.giq.2022.101783.
- [57] G. M. Jonathan, S. D. Yalaw, B. K. Gebremeskel, L. Rusu, et E. Perjons, « IT alignment: A path towards digital transformation success », *Procedia Computer Science*, vol. 219. Elsevier B.V., p. 471-478, 2023. doi: 10.1016/j.procs.2023.01.314.
- [58] R. Jacobi et E. Brenner, « How Large Corporations Survive Digitalization », in *Digital Marketplaces Unleashed*, C. Linnhoff-Popien, R. Schneider, et M. Zaddach, Éd., Berlin, Heidelberg: Springer, 2018, p. 83-97. doi: 10.1007/978-3-662-49275-8\_11.
- [59] K. Karunasena et H. Deng, « Critical factors for evaluating the public value of e-government in Sri Lanka », *Government Information Quarterly*, vol. 29, n° 1, p. 76-84, janv. 2012, doi: 10.1016/j.giq.2011.04.005.
- [60] W. H. DeLone et E. R. McLean, « The DeLone and McLean Model of Information Systems Success: A Ten-Year Update », *Journal of Management Information Systems*, avr. 2003, Consulté le: 11 janvier 2025. [En ligne]. Disponible sur: <https://www.tandfonline.com/doi/abs/10.1080/07421222.2003.11045748>
- [61] N. P. Rana, Y. K. Dwivedi, et M. D. Williams, « Evaluating alternative theoretical models for examining citizen centric adoption of e-government », *Transform. Gov.-People Process Policy*, vol. 7, n° 1, p. 27-49, 2013, doi: 10.1108/17506161311308151.
- [62] A. Ingrams, A. Manoharan, L. Schmidhuber, et M. Holzer, « Stages and Determinants of E-Government Development: A Twelve-Year Longitudinal Study of Global Cities », *INTERNATIONAL PUBLIC MANAGEMENT JOURNAL*, vol. 23, n° 6, p. 731-769, 2018, doi: 10.1080/10967494.2018.1467987.