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Managing the Sustainable Transition to E-Governance as an Approach to Progress Towards Sustainable Development Goals in Algeria: Requirements and Mechanisms

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Abstract:

This research seeks to discuss the extent of Algeria's ability to use information and communication technology effectively as an enabling force in its efforts to face the current and emerging challenges in the digital age through a comprehensive framework proposal that includes defining the requirements and mechanisms of management and establishing electronic governance system relations that takes into account the element of sustainability. By clarifying the nature of the relationship between the concepts of e-government and e -governance, and to determine the reality of the digital environment in Algeria and its readiness to embody this double electronic path, while providing a comprehensive vision to achieve a sustainable transformation towards e-governance in Algeria and what the management of this transformation requires from practical mechanisms that allow this to do so .

Keywords: Sustainable Transformation; Sustainable Development ; E-governance ; Algeria

1-Introduction :

The proliferation of information and communication technology (ICT) has led to an increased utilization of electronic services, particularly governmental services, within the framework of e-government. While e-government has yielded significant results in addressing certain challenges, such as enhancing citizens' access to information electronically through multiple channels and improving work procedures and organizational performance management, its impact on administrative reform and the development of public service delivery methods has been limited. This limitation arises from the evolving expectations of citizens and stakeholders (civil society and the private sector) regarding government. These parties are no longer satisfied with unidirectional decisions; rather, they seek to participate in prioritizing, influencing policy-making, and designing services, as well as holding the government accountable for its performance outcomes. This shift has necessitated a change in governmental policies towards a transition to e-governance, while considering the element of sustainability and development when formulating electronic response policies to the current situation, in alignment with national e-government strategies. These, together with e-governance, constitute what can be termed a 'dual e-gov construct,' enabling citizens and stakeholders to genuinely and effectively participate in the sustainable development process in an increasingly interconnected and digital world.

The aforementioned variables necessitate a transition to e-governance as a means of progressing towards sustainable development goals in Algeria. This imperative is driven by the new realities imposed by the necessity of building a sustainable environment that encourages the transition to a knowledge-based economy and the utilization of ICT for achieving sustainable development. Consequently, the objective of this study is to examine the extent to which Algeria can effectively harness ICT as an enabling force in its efforts to address current and emerging challenges in the digital age, through proposing a comprehensive framework for achieving a sustainable transition to e-governance in Algeria, taking into account the element of sustainability.

Therefore, this study seeks to investigate the following main problem: How can a sustainable transition to e-governance be managed in Algeria, utilizing mechanisms that ensure the fulfillment of the necessary requirements for achieving sustainable development goals?

Addressing the posed problem requires the adoption of a comprehensive and integrated approach that enables the description and analysis of the study variables, the determination of the relationships between them, the analysis of the reality of the digital environment in Algeria and its readiness to embody the dual path, and subsequently, the formulation of a comprehensive framework for achieving a sustainable transition to e-governance in Algeria..

2. E-Government and E-Governance: What Relationship?

Research in the early 2000s began to distinguish between e-government and e-governance in an attempt to identify the differences between them on the one hand, and to explore the relationship between these two electronic forms on the other, while emphasizing the need to develop service delivery transactions and activate network-connected participatory interactions electronically.

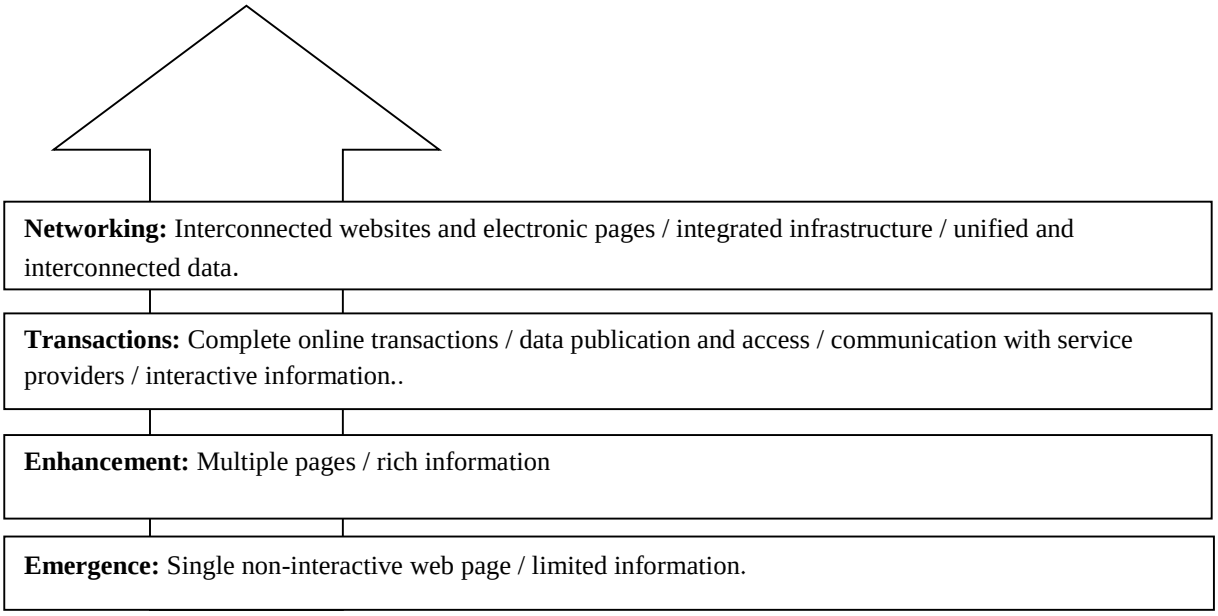
2.1.Definition of E-Government:

The term e-government represents a form of e-business that refers to the processes and structures aligned with the provision of electronic services to citizens and businesses alike (Al-Rifai,2009,308) . The World Bank defines e-government as 'the process of government institutions using information technology, such as wide information networks, the Internet, and mobile communication methods, which have the ability to change and transform relationships with citizens, businesses, and various government institutions. The results of these applications can lead to reducing corruption, increasing transparency, maximizing overall return, reducing expenses, and increasing citizen satisfaction with the role of government institutions in their lives. (Hussein et al, 2018, p134)

In 2016, the United Nations proposed a general framework consisting of four stages for the e-government development process (emergence, enhancement, transactional, connected) – see Figure (1). The connected stage is considered the most advanced in terms of e-government development and the most challenging to achieve effectively. During this stage, e-government is transformed into a

closely interconnected entity with an integrated infrastructure, enabling citizens to completely dispense with traditional government services. It also allows individuals and institutions to interact directly with government institutions through the electronic portal. Furthermore, it enables government entities to communicate with each other, reducing the time and effort required to achieve harmony between multiple government elements and ensuring the regular and highly efficient access and flow of information.

Figure 1: Stages of E-Government Development



Source: Malaeb, 2020, p 04.

The challenge in reaching the connected stage in this model has been compounded by the circumstances associated with the COVID-19 pandemic, and the resulting increased pressures to provide e-government services on a wider and more comprehensive scale. Consequently, governments that are still in the initial stages of establishing their e-government will face challenges in launching their electronic platforms effectively. (Malaeb, 2020, p 05)

2.2. Definition of E-Governance:

Scholars hold diverse views on establishing a unified definition of e-governance. One such definition, provided by the United Nations Educational, Scientific and Cultural Organization (UNESCO), is 'the use of information and communication technologies by public sectors to improve the delivery of information and services, encourage participation with citizens in decision-making, and make government more effective in terms of accountability and transparency.(Al-Harout, 2018, p14)

Heeks defines e-governance as 'the use of ICT to support good governance,' encompassing the following elements: (Jallam,2014)

- **E-administration:** Improving government processes by reducing costs and managing government work through strategic communication within the government.
- **E-citizens:** Connecting citizens with the government by supporting democracy, listening to citizens, and improving public services.
- **E-society:** Building interactions outside the government, such as working better with the business sector and civil society, and building government partnerships.

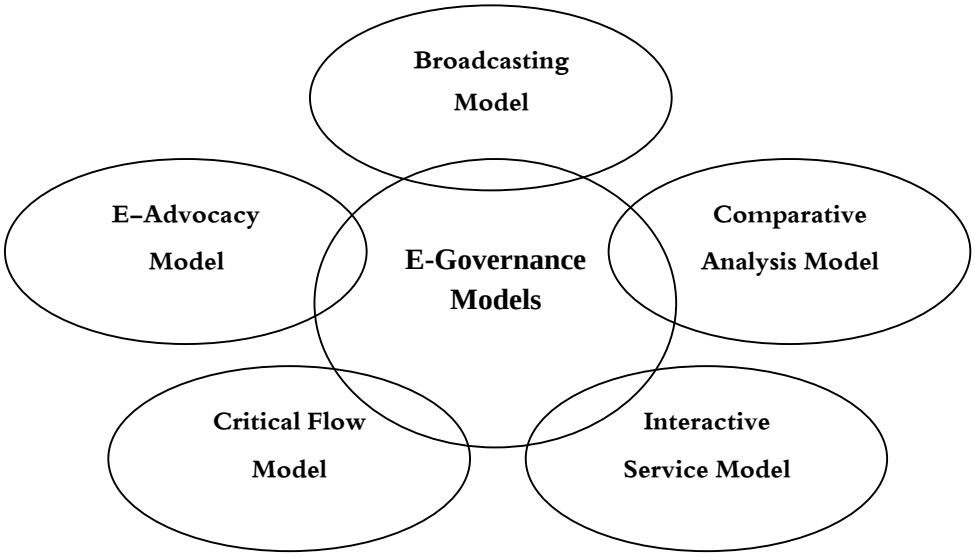
The term e-governance refers to the path taken by a society to increasingly interact between the state, the private sector, and civil society, under the influence of information and communication technologies. This provides governments with an opportunity to reinvent themselves by changing institutional relationships and involving partners in electronic management (Ahmed et al, 2012, p 287). E-governance represents a form of governance that uses all electronic activities to organize the complex relationships between formal and informal organizational entities within the state, thereby

supporting the maintenance of policies and their implementation mechanisms to achieve democracy, protect citizen rights, and increase efficiency in the distribution of electronic services for sustainable development. (Mrizq & Lounis, 2014, p138)

E-governance, with its various models, is crucial as it relates to the fundamental elements and principles of governance: transparency, fairness, accountability, and anti-corruption. Therefore, it is a strategic consideration based on a set of objectives: (Ahmiya, 2014)

- Enhancing interaction between citizens and the state to promote civil society participation in public affairs and strengthen social integration.
- Disseminating and supporting new e-governance services within government bodies to ensure access for all citizens and promote equal opportunities.
- Increasing the capabilities and responsiveness of public institutions through the use of ICT to achieve good governance.
- Contributing to the establishment of an environment conducive to sound economic growth.
- Promoting a knowledge-based society and bridging the digital divide.

Figure 2: E-Governance Models.



Source: Al-Harout, 2018, p19.

The transition towards e-governance requires the establishment of a comprehensive set of procedures related to the adoption of a national digital strategy and well-formulated, visionary sectoral strategies and action plans. This should be done in coordination with stakeholders from the private sector and civil society organizations for periodic review, with an emphasis on the need to include performance indicators in strategies and action plans. The implementation of e-governance is a process of maturation, not a sudden change to everything that exists. Based on this principle, Lee and Layne presented a four-stage model for the transition to e-governance, which includes:

Stage 1: Cataloguing of Information:

This stage represents the initial efforts of government institutions to establish an online presence, informing citizens about their activities, working methods, and the types of services they provide, along with making the necessary forms available.

Stage 2: Transaction:

This stage involves two-way communication, where citizens move from a passive to an active role. Government institutions in this stage seek to delegate a portion of their work to citizens by allowing them to interact with the institution's databases and enter required information through the institution's website, thereby making citizens participants in service delivery and helping to reduce the cost of these services. (Zarzar, 2015, pp101-102)

Stage 3: Vertical Integration / Intra-departmental Assimilation:

E-governance is not just about automating and digitizing existing processes; it involves transforming government services, which requires redefining the concept of government service itself. The full benefits of e-governance can only be realized when organizational changes accompany technological changes. Vertical integration aims to seamlessly integrate central and local systems so that transaction results can be exchanged between systems.

Stage 4: Horizontal Integration / Revolution:

Horizontal integration across different departments and functions significantly increases government efficiency through communication and information sharing at all levels and functions. Shared information is disseminated immediately. The benefits of e-government can only be achieved through interdepartmental integration of government services across various functional units, blurring the functional boundaries between the public and private sectors through ICT. **(**Shah, 2007,p130-131)

The rise of e-governance indicates new patterns of decision-making, power-sharing, and coordination made possible or necessary by the emergence of information technology. E-governance should be viewed as much more than just transferring existing public services online; it involves harnessing government information technology to redefine its social patterns and power structures to remain relevant in a more participatory, interactive, and transparent era. (Roy, 2001, p846)

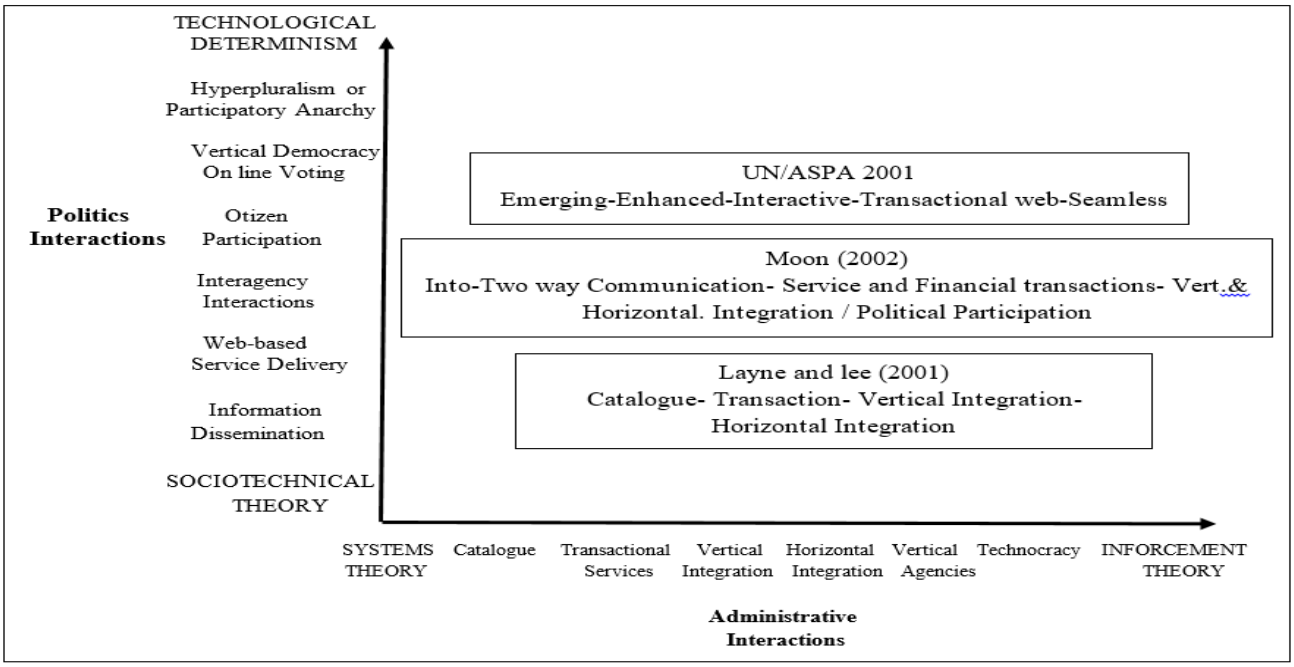
2.3. The Nature of the Relationship Between E-Government and E-Governance:

While these two electronic forms (e-government and e-governance) are perceived to progress linearly through different stages - side by side as an uninterrupted diameter - they use similar technologies but have unique tasks. They do not belong to the same upward spiral but generate converging curved paths, expressing separate patterns while emphasizing service delivery transactions and network-connected participatory interactions. The relationship between e-government and e-governance can be termed a 'dual e-gov construct,' a relationship of curved lines converging to continue using ICT to enhance citizen empowerment in government (providing various electronic links - customer transactions and citizen interactions - as converging curved paths) (Calistra & Melitski,2007,p87-89). E-government aims to employ ICT to achieve bureaucratic efficiency by increasing access to information, automating routine processes, and integrating systems, while e-governance seeks to enhance effectiveness by focusing on providing more participatory roles for citizens as interconnected actors within a normative vision aimed at achieving transparency to support democratic governance. (Calistra & Melitski,2007,p90)

Unlike the administrative inclinations of e-government, politics embodies the features of e-governance, primarily stemming from the networking domain, which follows an alternative approach to technology. Holden describes the evolution of integrated networks as a series of three stages. General managers first began using information technologies seriously in the 1960s with the Management Information Systems (MIS) movement, which focused on automation and efficiency. In the 1970s, the Information Resources Management (IRM) movement surpassed MIS, viewing technology as an interconnected system, paving the way for the current stage of technology management in the information age, characterized by accessibility and integration. By the 1990s, networks and e-governance converged around a political perspective that thrives on the common interest in digital communications and decentralized power, meaning that digital and decentralized actors became a channel to feed a networked world, raising the level of e-governance. (Calistra & Melitski,2007,p94)

However, the two paths can be represented as two axes: a vertical or administrative axis (e-government) and a horizontal or political axis (e-governance), with both axes performing diverse but integrated administrative and political tasks -see Figure 03-

Figure 03 : The dual e-gov construct



Source : Calista & Melitski, 2007,p97

Their curved relationship converges as e-government moves towards the administrative axis and e-governance towards the political axis, forming a dual e-gov construct, whereby: (Calistra & Melitski,2007,p101-102)

- E-government provides government services electronically, typically via the web, to reduce the physical nature of customer transactions by recreating them virtually.
- E-governance involves employing the web and internet to reform the way the state manages its democratic interactions by using networked interactions with citizens to enhance transparency and participation.

3.The Reality of the Digital Environment in Algeria and Its Readiness to Embark on the Dual E-Gov Construct:

Modern information and communication technologies are the fundamental ground for establishing and developing a digital environment across the globe. Moore's Law indicates that technological capabilities in the field of information technology double every 18 months, heralding a continuous revolution in technology and its implications (Kasmi & Malouki ,2018,p31). In this context, Algeria established a phased strategy in 2008 known as "E-Algerie 2013," with key objectives including: accelerating the use of ICT in public administration, economic institutions, and among individuals; developing high-bandwidth communications infrastructure; training and developing research and innovation in this field; and qualifying the legal framework for the use of this technology. Algeria has launched several projects to promote digitization, including the "Usratuk" project, the "Smart City Sidi Abdallah" project, and the e-learning project for university students (Bachari, 2020, p587), making digitization a foundation for achieving its development goals.

However, the desired digital development in Algeria remains in its early stages and suffers from significant delays in its spread and use, as evidenced by an analysis of Algeria's digital performance at the global and Arab levels.

3.1.Algeria's Digital Performance at the Global Level:

In 2019, Algeria ranked 98th out of 121 countries in the Network Readiness Index (NRI), with a total score of 35.30. This low ranking reflects the digital divide that Algeria suffers from, concerning the four main axes: ICT infrastructure through access, content, and future technology; the use of ICT by governments, businesses, and individuals; governance and the business environment through the

regulatory framework, trust, and inclusion; and the impacts of ICT use on the economic, social, and sustainable development levels. Algeria also ranked 102nd and 130th globally in 2017 in terms of ICT sector development and e-government development, respectively. (Bachari, 2020, p589-590)

3.2. Algeria's Digital Performance at the Arab Level:

At the Arab level, Algeria ranks 11th out of 22 countries in digital performance, based on the state's performance in strategic dimensions distributed across axes, as shown in the following table:

Table 1: Algeria's Digital Performance at the Arab Level.

Dimension	Axes	Value	Rank
Digital Foundations	Institutional Axis Infrastructure	43.66	11
Innovation Dimension	Education and Skills Innovation, Knowledge and Technology	40.28	9
E-Government	E-Government	47.33	12
Digital Business	Business Environment and Digital Readiness, Growth of Finance Markets	43.49	12
Digital Citizen	Education and Skills, Infrastructure	53.12	10
Sustainable Development (Cross-cutting Dimension)		62.05	

Index Value	Regional Average	Standard Scale
35.5	35.69	76.07

Source: The Arab Federation for Digital Economy and the Council of Arab Economic Unity, 2020, pp. 129-130.

According to the Arab Digital Economy Index report, Algeria is classified within the second group, which includes digitally promising countries in the digital transformation journey. These countries hold ranks from (6-12) and include: Kuwait, Jordan, Tunisia, Morocco, Egypt, Algeria, and Lebanon—while the first group includes Gulf countries as leading nations, except for Kuwait. These countries are characterized by possessing sufficient infrastructure and knowledge to move forward, and they can, within a medium period ranging from two to four years, transition to the ranks of leading digital countries if they adopt bold and decisive plans towards completing their digital transformation plans. This is in light of the need to finalize digital connectivity and deepen the use of digital identity through government platforms to support the provision of services to all citizens with the required accuracy and efficiency, as these countries have not yet achieved digital inclusivity for all citizens (The Arab Federation for Digital Economy and the Council of Arab Economic Unity, 2020, pp53-54).

Based on the above, the level of digital performance can be attributed to several factors, most notably: high prices of smartphones; weak geographical connectivity to high-bandwidth internet; failure to develop smart phone applications; delayed e-government development; cybersecurity issues; regulatory problems and inadequate legislation; and weakness in the production of high-quality goods and services in the ICT sector (Bachari, 2020, p591).

The aforementioned factors have affected the building of an e-society (digital society) capable of embodying the dual e-gov construct in Algeria. William Martin has identified several criteria through which the characteristics of this society can be clarified, including:

- **Technological Criterion:** Where information technology becomes the primary source of power.
- **Social Criterion:** Where knowledge becomes a means to improve living standards and spread computer and information awareness, providing high-quality information access.
- **Economic Criterion:** Where knowledge emerges as a fundamental economic factor, as a resource, service, or source for creating new job opportunities.

- **Political Criterion:** Where freedom of knowledge leads to the development and crystallization of the political process through the adoption of democracy and public participation in governance.
- **Cultural Criterion:** Manifested through the recognition of the cultural values of knowledge and information, such as respecting intellectual property and ensuring the confidentiality of personal data .(Ayash & Boukil, 2018, pp13-14)

As a result, ICT has become essential for enabling citizens to effectively participate in a comprehensive administrative and political process in their countries, contributing to strengthening the legitimacy of their governments. However, this requires a fundamental change in how governments operate internally to manage public affairs and in their interaction with citizens, especially in their core function of promoting good governance as a prerequisite for achieving sustainable development. The concept of e-governance has contributed to the emergence of new concepts of citizenship, with the primary goal of engaging and empowering citizens by highlighting both their needs and responsibilities. (ESCWA,2012,p08)

In this context, the United Nations E-Government Survey 2020 indicates that Algeria is classified within the low level of the E-Participation Index (0.0-0.25). Since its inception, the UN E-Government Survey has used a three-point scale that distinguishes between:

- **Information Provision:** Government provision of information to citizens.
- **Consultation:** Where the government consults with individuals on policy or service delivery at various stages of the process and may provide feedback.
- **Decision-Making:** Where the government involves citizens in decision-making.

The study evaluates e-participation based on the features of national e-government portals related to these three categories, and the value of the E-Participation Index for each country is calculated by adding the values for each of the specified features and dividing the total by the maximum possible value for standardization (United Nations, 2020, pp130-131).

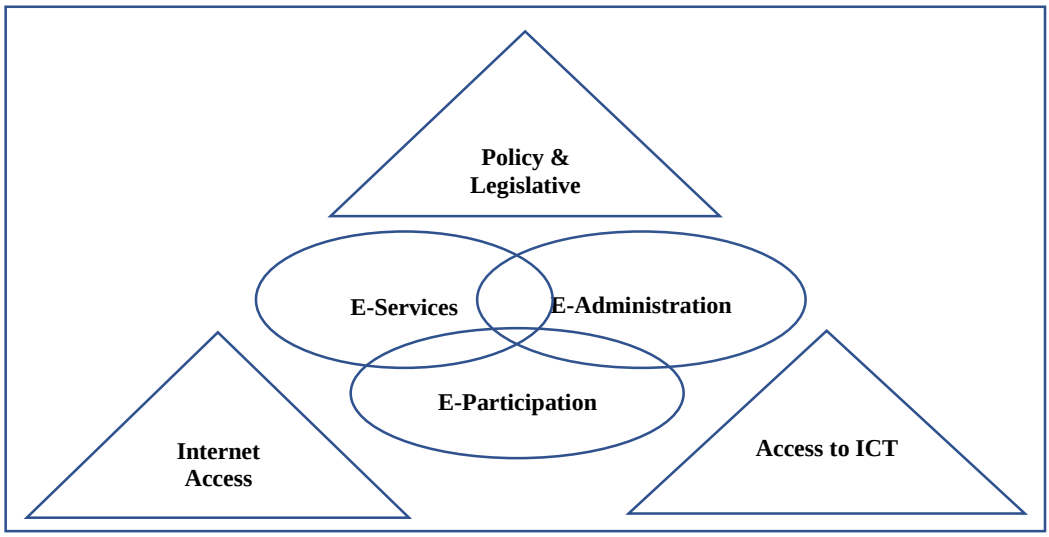
4. Towards a Comprehensive Framework for Achieving Sustainable Transition to E-Governance in Algeria (Requirements and Mechanisms):

What distinguishes e-governance is the specificity of its requirements, considering its 'technical' nature and 'political' objectives. It relies on costly technical capabilities and supportive political will, while its tools are technical and require protection and security. This necessitates a well-defined transformation strategy with a clear vision regarding revolutionizing the relationship between official institutions and various actors (citizens, private sector, civil society organizations). E-governance can be described as a procedure, structure, mechanism, and strategy. Sustainable transition to e-governance generally requires working on three interconnected components, as well as three supporting components:(ESCWA, 2014, pp 24-25)

- **E-Administration:** Government investment in ICT to enhance transparency and accountability in central and local government institutions and improve their functions and efficiency.
- **E-Services:** Government investment in providing government services electronically to all.
- **E-Participation:** Government investment in enhancing interaction between government institutions and citizens to achieve better policies, more efficient services, and outstanding government performance. This component is linked to voting, accountability, support for civil society organizations, and the development of parliaments.
- **Policy and Legislative Environment:** Government investment to support the launch and implementation of ICT projects that contribute to development and strengthen policies, legislation, and regulatory rules for e-governance, as well as investment in building internal institutional capacities for government agencies responsible for policy development and implementation monitoring.
- **Access to ICT:** Includes investment in public and private sector infrastructure and internet connectivity to enhance citizen use of ICT, such as communication centers, including access centers in remote and deprived areas and public internet access centers.

- **Internet Access:** Investment in ICT to enhance digitization and the use of government information in its digital form by citizens, which is closely linked to national legislation on access to government information, such as freedom of information laws.

Figure 3: Components of E-Governance



Source: ESCWA, 2014, p 25.

Accordingly, the requirements for a sustainable transition to e-governance in Algeria revolve around key areas (telecommunications infrastructure and information technology resources, human resources, e-governance, security, and privacy legislation). Achieving each of these requires providing a set of practical mechanisms through the following practices:

First: Developing Capacities for Digital Transformation in Pursuit of Sustainable Development:

Digital transformation is not just about technologies; it is, above all, a process that includes transforming public governance models, creating innovative government policies, and transforming organizations, services, and programs by leveraging digital technology. The main pillars of digital capacity development in the context of the transition to e-governance include: (ESCWA, 2014, p204)

- Enhancing transformational leadership, building digital capabilities, and changing mindsets at the individual and institutional levels.
- Establishing a comprehensive legal and regulatory framework to develop an integrated institutional ecosystem.
- Transforming organizational structure and culture.
- Enhancing integrated thinking systems for policy development and service delivery.
- Developing ICT infrastructure, availability, and access to technology through high-speed broadband internet, and secure access to new technologies.
- Mobilizing resources and aligning priorities, plans, and budgets through the public and private sectors.
- Strengthening the capabilities of public administration schools and other capacity-building mechanisms.
- Developing capacities at the community level to bridge the digital divide and ensure no one is left behind.

Second: Moving Towards Data Governance:

Data governance represents a key resource for e-government at the national level, supported by data strategies, networks, and data ecosystems, to enable strategic management of data access and the development of data-driven policies. The principles of effective governance for sustainable development, adopted by the United Nations Economic and Social Council, have defined the extent

to which adopted development strategies and policies are linked to data governance, as shown in the following table:

Table 2: Principles of Effective Governance for Sustainable Development Adopted by the Economic and Social Council: Implementation Strategies and Their Link to Data Governance.

Commonly Used Strategies for Activating Principles		
Key Elements and Related Principles	**Direct Relationship with Data Governance or Strategies/Policies**	**Indirect Relationship with Data Governance or Strategies/Policies**
Effectiveness: Efficiency, Sound Policy Making, and Cooperation	Data Sharing, Investment in E-Government, Strengthening National Statistical Systems, Monitoring and Evaluation Systems	Strategic Planning and Foresight, Results-Based Management, Performance Management, Financial Management and Control, Risk Management Frameworks, Science-Policy Interface, Networked [1] Governance
Accountability: Integrity, Transparency, and Independent Oversight	Proactive Information Disclosure, Open Government Data, Beneficial Ownership Registers, Lobbying Registers	Budget Transparency, Independent Audit
Inclusivity: Leaving No One Behind, Non-Discrimination, Participation, Devolution, Intergenerational Equity	Data Disaggregation, Universal Birth Registration	Accessibility Standards, Participatory Budgeting, Multi-Level Governance, Strengthening Urban Governance, Long-Term Regional Planning and Spatial Development

Source: United Nations, 2020, p. 161.

Data governance provides a central point that allows governments to guide data use and policy development in a coordinated manner. Data-driven decisions are at risk due to low data quality, data falsification, data obsolescence, or security and privacy threats.

Third: Establishing an Open Data Base (Transition to Open Government):

Open government themes revolve around three principles: transparency, participation, and collaboration. To embody these principles, open government adopts new technological developments, particularly those that allow for improved interaction between the government and its various components on one hand, and the private sector and civil society on the other. New technologies enable the development and implementation of open government initiatives within frameworks and models related to four stages: open data (openness for transparency), open collaboration (open deliberations on policies and programs), open engagement (co-design and co-management of public services), and open innovation. Recently, a consensus has emerged among governance specialists that the fundamental elements of open government concepts focus on transparency, access to government data, responsiveness to the desires of individual and collective stakeholders, enhancing integrity, and participatory decision-making.(ESCWA, 2018, pp 52-55)

The transition to open government requires a number of decisions, legislation, and administrative, legislative, regulatory, institutional, and technological procedures. These affect various government entities and the government's interaction with citizens and all stakeholders. Open government is achieved through four primary channels, including:(ESCWA, 2018, p63)

- Government proactive publication of government information.

- Disclosure and publication of government information upon request by stakeholders.
- Publication of government information during public meetings.
- Publication and handling of complaints and reports of violations.

Reliance on open portals allows access to various government data and statistics published in the form of datasets, and these packages can be easily downloaded without any legal, financial, or technical barriers.

Membership in the Open Government Partnership is a declaration by member states of their commitment to implementing open government principles, preparing an integrated implementation plan, and adhering to this plan. It is noted that Algeria has not joined this partnership, and only three Arab countries are members of the Open Government Partnership: Jordan, Tunisia, and Morocco (ESCWA, 2018, p55).

Fourth: Activating Digital Citizenship:

This element is linked to the vitality of citizens and their ability to access electronic spaces, a requirement that exceeds literacy. These transformations aim to establish a public consultation system centered on citizens' choices, and therefore citizens must possess sufficient qualifications to use electronic means. Herein lies the importance of digital citizenship as an entry point that emphasizes the citizen's commitment to their duties and responsibilities during digital transactions. This prepares a qualified digital citizen to contribute to sustainable development within society. The dimensions of digital citizenship should be promoted as a national priority, as it is a set of rules, controls, standards, norms, ideas, and principles followed in the optimal use of technology, which citizens need. A digital citizen combines digital fluency skills, knowledge, and an orientation to participate in society as an active and lifelong learner. Digital citizenship represents an enabling force for integration between civil, cultural, and social society, as it is linked to four interconnected and organized components, including:

- Digital ethics, which refers to the responsibility of online behavior.
- Digital culture, which includes internet access, technological skills, and psychological abilities to use the internet in effective communication with others.
- Critical protection, where the most important and skillful participation is in challenging the status quo and promoting social justice online.
- Effective online participation, meaning political, cultural, economic, and social participation in existing electronic social structures.(Hassan Rabhi, 2018, pp.12-14)

Fifth: Developing Relevant Legislation (Bridging the Legislative Gap):

Sustainable transition to e-governance requires establishing a legislative and regulatory framework to support the transition. This framework includes drafting new laws or adapting some existing legislation, such as legislation on electronic communications, freedom of expression and media, privacy, and cybersecurity. The necessary regulations must also be issued to enforce laws and legislation that help in the dissemination and use of the technology necessary to implement e-governance, as shown in the following table:

Table 3: Cyber Legislation and Its Relationship to the Application of E-Governance

Law	Legal Chapter	Provisions Related to E-Governance
Electronic Communications Law	Legal System for Electronic Network Service Providers	-Restriction of access to certain websites and electronic services. - Monitoring of communication service providers and data hosts. - Procedures for reporting illegal information. - Non-disclosure of publisher identity and protection of personal data.

		- Right of reply for the person mentioned in the information transfer process.
	Information Encryption	- Use, provision, import, and export of encryption methods.
	Surveillance of Private and Personal Communications	- Prohibition of surveillance of private and personal communications.
Freedom of Expression Law	Right to express opinions and ideas, whether orally, in writing, visually, or by any other means (subject to public order).	- Submission of feedback, ideas, and proposals to the government. - Discussion of topics for dialogue, whether through personal attendance at meetings or using social media
Media Law	Right to freedom of expression, right to obtain and use data and information for media purposes, provided that the media, in all its forms, is independent and carries out its mission freely, with specific categories of information that public entities are entitled not to disclose.	- Freedom of expression and fundamental freedoms of citizens. - Citizen's right to access information on public affairs. - Freedom of media work and the journalist's right to seek, obtain, and publish information. - Non-subjection of journalists to prior censorship, without prejudice to their responsibility for published content. - Prohibition of demanding journalists to disclose their sources of information, except through the judiciary.
Processing and Protection of Personal Data	General conditions required for the legality of personal data processing.	- Processing of personal data and freedom of expression. - Obligations of the processing controller when collecting information from the data subject. - Right of access, rectification, and objection. - Confidentiality of processing, declaration to the competent official supervisory authority, and obtaining prior authorization. - Publication of processing.
	Judicial Reviews Liabilities and Penalties	- Judicial Reviews - Crimes and Penalties
	Crimes of Infringement on Information Systems	- Crime of unlawful access to or remaining in an information system with access to data.

Cybercrimes		- Crime of obstructing the operation of an information system.
	Crimes of Racism and Crimes Against Humanity by Informational Means	- Crime of publishing and distributing racist information by informational means. - Crime of threatening or assaulting persons due to their ethnic or religious affiliation or color by informational means.
	Information Crimes Against the State and Public Safety	- Crime of disrupting government work by informational means. - Crime of failure to report or false reporting of information crimes. - Crime of obtaining confidential state information by informational means. - Crime of transmitting data that threatens public security and safety by informational means.

Source: ESCWA, 2018, pp. 116-119 (adapted by the researcher).

It is generally noted that while the issue of e-governance has been largely covered by scientific literature in terms of technical capabilities, the main challenge is not technical, but rather how to establish governance structures. The sustainable transition to e-governance is a shift from a technical structure to multiple operations at different levels, enabling the government to harness information technology to redefine its social patterns and power structures to remain relevant in a more participatory, interactive, and transparent era.

5. Conclusion:

The rise of e-governance indicates new patterns of decision-making, power-sharing, and coordination that have become possible, and particularly necessary for developing countries, including Algeria, to address current and emerging challenges in the digital age. This supports the maintenance of policies and their implementation mechanisms to achieve democracy, protect citizen rights, and increase efficiency in the distribution of electronic services for sustainable development.

The transition to e-governance in Algeria requires a fundamental change in how the government operates internally to manage public affairs, especially in its core function of promoting good governance as a prerequisite for achieving sustainable development. This necessitates the adoption of a well-defined transformation strategy with a clear vision regarding revolutionizing the relationship between official institutions and various actors (citizens, private sector, civil society organizations) within a digital environment ready to embody the dual e-gov construct. However, Algeria's digital performance indicators at the global and Arab levels indicate that the desired digital development in Algeria is still in its early stages, affecting the building of an e-society (digital society/information and knowledge society) capable of embodying the dual e-gov construct. This is due to the digital divide that Algeria suffers from, resulting from a lack of digital infrastructure, sustainable e-government platforms, and limited resources for implementing digital government policies.

Given that e-governance is distinguished by the specificity of its requirements due to its 'technical' nature and 'political' objectives, managing the sustainable transition to e-governance in Algeria requires fulfilling a set of requirements related to key areas (telecommunications infrastructure and information technology resources, human resources, e-governance, security, and privacy legislation). Achieving each of these requires providing a set of practical mechanisms related

to managing the transition from a technical structure to multiple operations at different levels through developing capacities for digital transformation in pursuit of sustainable development, data governance, establishing an open database, activating digital citizenship, and preparing and rapidly adapting the legal and regulatory framework to ensure security, protection, and freedom of information conditions for key actors in the governance system.

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