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Digital Transformation and its Impact on the Public Facility

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Abstract
This research examines the impact of digital transformation on the performance and legal governance of public utilities within the framework of administrative law, highlighting the shift from traditional to digital management models driven by ICT advancements and lessons from the COVID-19 crisis. It defines key concepts (public utility, digital transformation, e-government), analyzes requirements for successful implementation (legislative, technical, human, security), and evaluates effects on core public service principles (continuity, equality, adaptability) and employee roles, demonstrating reduced bureaucracy, enhanced transparency, minimized corruption, and improved efficiency—while identifying legislative gaps in systems like Egypt and Iraq. The study concludes that digital transformation significantly enhances public utility effectiveness but necessitates updated legal frameworks to align with administrative law principles.

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Introduction

The current era is witnessing remarkable advancements in information and communication technologies, resulting in a fundamental shift in public facility management mechanisms. This shift involves moving from traditional approaches to adopting sophisticated digital methodologies based on modern technological tools. This digital transformation is expected to enhance the efficiency and performance of public facilities, leading to a central research question: assessing the impact of digital transformation on the effectiveness of public facility performance within the framework of administrative law.

Digital transformation legislation has emerged as a strategic priority internationally, particularly in light of the precautionary measures imposed by the global health crisis resulting from the COVID-19 pandemic. This crisis revealed the urgent need to deepen reliance on the communications and information technology sector. This was evident in the widespread adoption of distance learning platforms, virtual meeting mechanisms, and the facilitation of communication between individuals both domestically and internationally, all within the framework of preventative measures necessitated by the pandemic. In this regard, it became clear that countries with advanced communications and information technology infrastructure were better equipped to meet the challenges and mitigate the negative impacts of the crisis. This underscores the pivotal role of digital transformation in enhancing institutional resilience and crisis response within the framework of public law and legislative policies.

Given the increasing importance of digital transformation and its pivotal role in streamlining decision-making, reducing time and effort, combating administrative corruption, and developing mechanisms for delivering electronic services—all of which contribute to simplifying procedures for citizens and supporting the achievement of sustainable development goals—it has become essential to address a range of concepts related to digital infrastructure management, particularly those connected to the public utility system in light of contemporary technological advancements.

The impact of information and communication technologies (ICTs) has become an established reality in achieving development across its various administrative, economic, social, and cultural dimensions. Furthermore, possessing and investing in these technologies has become a fundamental criterion for evaluating national progress and measuring competitiveness. However, the essential characteristic of the information society is not limited to simply providing digital content online, regardless of its field. It extends to utilizing this content in knowledge production, enhancing investment in ICT systems, and directing them towards achieving economic and social development. In this context, the digital management model represents a qualitative leap in the public sector, opening new horizons for improving the quality of services provided, raising levels of transparency and accuracy, and reshaping the traditional model of public administration to align with the requirements of digital transformation. This constitutes a true revolution in the management of government institutions and agencies.

Furthermore, the shift towards digital governance is an irreversible global trend, with most countries recognizing its strategic importance given the organizational and procedural advantages it offers, particularly in administration. This model is poised to revolutionize procedures, enhance the efficiency of public service delivery, and solidify the principle of transparency.

From this perspective, this research addresses digital transformation and its impact on the public sector, through the following points:

The Importance of the Research

The importance of this research stems from the fact that it highlights the digital transformation in the public facility and reviews its most prominent developments, with the aim of moving from the traditional work pattern to the digital pattern, which contributes to developing the performance of the public facility and improving its quality, which is reflected positively on the quality of services provided to citizens and achieves the public interest.

The Research Problem

The rapid development of information and communications technology has led to the adoption of modern digital methods in the management of public facilities, as an alternative to traditional methods. This poses a legal and practical problem related to the extent of the impact of this digital transformation on the performance of the public facility, in terms of its efficiency and quality of services, and the extent of its compatibility with the legal principles governing it. This calls for an analytical study to demonstrate this impact and evaluate its results. Therefore, the problem of this research is represented in:

1. 1.What is the concept of digital transformation, and its importance in public facilities management ?
2. Are current administrative laws and regulations consistent with the digital requirements of public facilities?
3. What is a public facility?
4. Does digital transformation affect the work of public service employees?
5. How has digital transformation impacted the traditional legal principles governing public services?

Research Hypotheses

By presenting the research problem, its importance and objectives, the following main hypothesis was formulated :

Digital transformation contributes to improving the efficiency and quality of public utilities' performance, but it requires developing legislation to ensure compliance with administrative law principles.*

From this main hypothesis, the following sub-hypotheses can be derived:

1. The greater the reliance of public facilities on digital technologies, the higher their operational efficiency, manifested in reduced time, lower costs, and increased procedural accuracy.
2. Current public utility legislation does not sufficiently comply with the legal requirements arising from digital transformation (e.g., privacy protection, electronic accountability).
3. Digital transformation requires developing legal and regulatory frameworks for public utilities to keep pace with technological developments.
4. Digital transformation impacts the continuity of public services, especially in the face of technical disruptions or breaches.

Research Methodology

The descriptive analytical approach was adopted as it is considered the best approach for these studies, through reviewing the literature related to the research topic, presenting the legal texts related to the research topic and then analyzing them, in addition to the comparative approach through comparing the Egyptian system and the Iraqi system

Based on the above, the research will be divided into several axes that help answer the research questions. Each axis branches out into a set of explanatory and interpretive points, as follows:

1. **First Axis**: Digital transformation of the public utility
2. **Second Axis**: The impact of digital transformation on public utilities

Finally, the research concludes with a set of results and recommendations

First Axis

Digital transformation of the public utility

Information technology has become pivotal in various aspects of life, including public administration, where it has significantly contributed to developing administrative work methods and improving public service delivery mechanisms. This, in turn, enhances institutional performance and the quality of services provided to citizens. This impact is evident in the integration of technological infrastructure, such as advanced computing systems and digital communication networks, into the administrative environment. This integration has led to increased operational flexibility and streamlined procedures, all while adhering to legal standards governing the operation and effectiveness of public utilities.

The tremendous advancements in information and communication technology have resulted in a fundamental shift in the interaction between government agencies and citizens, as well as in the mechanisms of interaction among government agencies themselves. This shift is evident in the development of public services to align with contemporary technological advancements. The concept of "e-government"

has emerged as a legal and regulatory framework aimed at achieving this transformation through the application of information network technologies and artificial intelligence systems. The primary objective of e-government is to ensure the efficient delivery of services to citizens, businesses, and investors, with a focus on transparency, accountability, speed of execution, and cost reduction.

This is achieved through advanced mechanisms that ensure :

1. Simplifying administrative procedures: facilitating beneficiaries' access to services without time or space barriers.
2. Enhancing performance efficiency: achieving speed and accuracy in completing transactions through unified electronic systems.
3. Improving the quality of administrative decisions: relying on integrated databases to support legal and administrative decision-making, away from discretionary decisions.
4. Rationalizing government expenditures: Reducing operating costs through digital transformation and adopting e-governance standards.

Thus, e-government is a contemporary legal model for achieving a balance between the requirements of technological development and the guarantees of public rights, in accordance with legislative frameworks that regulate the relationship between the administration and the citizen in the digital space [1].

First: The concept of digital transformation of public services and its importance

The public utility represents the essential axis of administrative law, so much so that some jurists base all theories of administrative law on this idea, while others consider it the basis of administrative law.

There are several definitions to determine what is meant by public facility, including:

1. A public utility is defined as a service or activity that achieves a public benefit or meets a public need, regardless of whether the entity that provides the service and practices the activity is an entity subject to public law or an entity subject to private law - such as an individual or a company, provided that the authority's supervision and control over the aforementioned activity is always achieved in all cases [2].
2. As some define it, it is a public benefit project managed by the state directly or indirectly, and in which it enjoys the privileges of public authority [3].
3. It was also said that it is a project that operates regularly and steadily under the supervision of government officials with the aim of providing a public service to the public, while being subject to a specific legal system [4].
4. Or they are legislations that aim to serve the public interest, and the administration retains the final say in establishing, managing, and canceling them [5].

The Iraqi judiciary, specifically the Court of Cassation, has defined the public utility by saying: "It is a project managed by an administrative or regulatory body or supervised by its management, and intended to provide services or meet needs of public benefit" [6].

The Administrative Court in Egypt defined the public utility as "any project established by the state or supervised by its management, which operates regularly and continuously and uses the powers of the administration to provide the public with the public needs it requires, without the intention of profit, but rather with the intention of contributing to the maintenance of public order and serving the public interests of the state. The distinguishing characteristics of the public utility are that the project is one of the projects of public benefit, meaning that its purpose is to meet public needs" [7].

We conclude from the previous definitions that the purpose of the public facility is to provide services and meet public needs (achieve the public benefit) and it is managed or supervised by the public authority.

The concept of digital transformation

Digital transformation is no longer an option, but rather a necessity for all organizations seeking to enhance their operational efficiency and ensure their continuity. It currently represents a fundamental pillar of modernity, becoming a pivotal means of achieving excellence and advancement within the global competitive system.

Digital transformation has several definitions: "Transformation in businesses or governments, i.e., making radical changes to the business model, procedures, and operations. Transformation may involve completely changing the product or service delivery method. It may also be strategic, intervening in all functions of the organization, from sales to supply chain, information technology, and the entire value chain"[8].

Some have defined it as "the process of transforming the model of government institutions or private sector companies into a model that relies on digital technology to facilitate and provide services and products. That is, it is a reflection of the digital economy resulting from the revolution in the fields of communications and technology in light of the existence of an advanced economy that operates according to knowledge, artificial intelligence, and data analysis"[9].

It is also known as "the process of government sectors or companies transitioning to a business model that relies on digital technologies to innovate products and services and provide new revenue channels that increase the value of their products"[10].

[1] Abdullah Ahmed Al-Khader, Munther Abdul Aziz Al-Shamali, The Legal System of E-Government in the State of Kuwait, Legal Books, Dar Al-Maaref, Alexandria, 2006, p. 3.

[2] Muhammad Ali Jawad, Principles of Administrative Law, Al-Sanhouri Library, 2010, Beirut, p. 71.

[3] Issam Abdel Fattah Matar, E-Government between Theory and Practice, Dar Al-Jamiah Al-Jadeed, 2008, p. 74.

[4] Sulaiman Muhammad Al-Tawi, A Concise Guide to Administrative Law, Dar Al-Fikr Al-Arabi, 1985, 319.

[5] Majed Ragheb Al-Helou, Administrative Law, Arab University House, 2006, p. 337.

[6] Court of Cassation in Iraq, Decision No. 326, issued on 4/20/1968

[7] Administrative Court of Egypt, Case No. 2489 of 1957, Collection of Rulings, Eleventh Year, p. 443.

[8] Omar Abdel Hafeez Ahmed Omar, Digital Transformation and its Role in Achieving Sustainable Development Goals - Egypt as a Model, an article published in the Journal of Al-Zaytoonah University of Jordan for Legal Studies, Volume (2), Issue (3), 2021, p. 158.

[9] Akram Nema Ali, Digital Transformation and Its Role in Some Economic Variables: Foundations and Requirements, a study published in Al-Ghari Journal of Economic and Administrative Sciences, Volume 20, Special Issue, 2024, p. 235.

[10] Mohamed Azzam, Features of Digital Transformation in the New Republic, an article published in Democracy Magazine, issued by Al-Ahram Foundation, Volume 21, Issue 83, July 2021, p. 103.

Therefore, digital transformation in the field of management is the digitization of administrative processes through information and communication technologies to achieve the vision and mission of management and a process that supports the efficiency and performance of administrative work.

In the context of global technological developments, the vast majority of countries have adopted comprehensive policies and strategies to keep pace with the requirements of the digital age. No country has shown reluctance to join the global path towards the transition to a digital society. Thanks to the flourishing and expanding use of digital means, countries have sought to improve the performance of their government departments and modernize the management of their public facilities, which has led to the emergence of the concept of e-government [11].

The emergence of the concept of e-governance for public facilities represents a natural development resulting from digital transformation processes. The use of digital technologies and modern communications applications has contributed to re-engineering administrative work mechanisms. Therefore, it is necessary to define the concept of e-governance briefly.

Terms such as "e-administration" and "e-government" have recently emerged as a direct result of the information revolution and rapid developments in modern communications technologies, including the expanding use of computers, their networks, and their diverse applications. This progress has contributed to linking government agencies, both within a single geographic location and across multiple locations, through integrated communications networks, leading to the formation of a unified computer system that serves as the basic infrastructure for e-government [12].

The World Bank defines e-government as: “A modern term that refers to the use of information and communication technology to increase the efficiency, effectiveness, transparency, and accountability of the government in the services it provides to citizens and the business community, and to provide them with information, which supports all government procedural systems, eliminates corruption, and gives citizens the opportunity to participate in all stages of the political process and related decisions that affect various aspects of life” [13].

There are various legal definitions related to this issue, and they can be presented as follows:

It is said to be "a management process based on the unique capabilities of the Internet and business networks in planning, directing, and controlling the resources and capabilities of the organization and others without limits in order to achieve the organization's goals" [14].

E-management generally depends on developing the information infrastructure within the institution in a way that achieves the integration of the vision and then the performance of its work [15].

It can also be defined as the process of automating all administrative tasks and activities of the organization by relying on all necessary information technologies (communications, devices, software) to achieve the organization’s goals [16].

It is also said that it is the use of digital information technology in carrying out administrative transactions, providing public services, and enhancing communication mechanisms with citizens, thus ensuring a greater degree of transparency and democratic participation [17].

It is also defined as an integrated electronic system that relies on communications and information technology with the aim of transforming traditional manual administrative procedures into operations implemented using modern digital technologies, thus contributing to improving efficiency and developing institutional performance [18].

It is also known as a means of transcending the limits of time and place, whether from within or outside the organization, in obtaining services, by integrating information technology with the tasks and responsibilities of the administrative apparatus, with a continuous commitment from management to develop mechanization processes for all activities, simplify procedures, and accelerate the completion of transactions with high efficiency[19].

In conclusion, the digital transformation of the public utility means employing scientific and technological progress in the fields of communications and information technology in order to organize and facilitate various administrative processes, thereby contributing to enhancing the efficiency of the public utility’s performance and achieving the highest levels of quality in providing its services.

The importance of digital transformation in the public sector

The shift from traditional administrative systems that rely on paper transactions and routine procedures to electronic and digital management has become an inevitable necessity and a natural step imposed by the demands of the contemporary work environment, as a result of scientific development that has permeated most aspects of human life, Electronic management has become a kind of strong response to the challenges of the 21st century. Countries became engaged in an accelerating race among themselves and against time to achieve their strategic goals, and those countries that lagged behind in keeping pace with technological progress faced fundamental difficulties in securing the basic necessities for

[11] Majed Ragheb Al-Helou, Management Science and Principles of Islamic Sharia, E-Government, Maaref Establishment, Alexandria, 2005, p. 416.
[12] Abdel Fattah Bayoumi Hegazy, The Legal System for the Protection of E-Government, Book Two, First Edition, Dar Al Fikr Al Arabi, Alexandria, 2023, p. 7.
[13] Aidouni Kafiyya, Ben Hajouba Hamid, Electronic Administration in the Arab World and Ways of Implementing It (Reality and Prospects), a study published in Al-Asil Journal of Economic and Administrative Research, Issue Two, December 2007, p. 221.
[14] Najm Aboud Najm, E-Management (Strategy, Functions and Problems), Mars Publishing House, Kingdom of Saudi Arabia, 2004, p. 127.
[15] Raafat Radwan, E-commerce, Head of the Information and Decision Support Center, Cairo, p. 3.
[16] Hamad Mukhtar, The Impact of E-Government on Public Facility Management and its Applications in Arab Countries, Master’s Thesis in Political Science and International Relations, Political and Administrative Organization Department, University of Algiers Ben Youssef Ben Khedda, 2007, p. 6.
[17] Majed Ragheb Al-Helou, Government and Public Utilities, a paper presented at the First Scientific Conference on the Legal and Security Aspects of Electronic Operations, Part Four, Security and Administrative Axis, held at the Dubai Police Academy, Research and Studies Center, Dubai, UAE, 2003, p. 10.
[18] Tariq Abdel Raouf Amer, E-Administration, Contemporary Models, Dar Al-Sahab for Publishing and Distribution, First Edition, 2007, p. 2.
[19] Hisham Abdel Moneim Okasha, Electronic Management of Public Facilities, Dar Al Nahda Al Arabiya, Cairo, 2004, p. 23.

a decent life for their citizens [20]. Therefore, many institutions and countries now manage their diverse activities without relying on traditional, routine methods, resulting in a significant decrease in the need for paper. Consequently, e-management is the latest school of management, relying on the internet and business networks to perform essential administrative tasks, including planning, organizing, directing, and controlling using digital methods [21].

The importance of digital transformation lies in its ability to contribute to addressing the problems facing humanity on the one hand, and to activate development paths and enhance their sustainability on the other, through its positive impacts on various economic, social, environmental, and even cultural aspects, as technology represents a facilitating and stimulating factor in supporting all these aspects [22]. Consequently, countries have begun competing to implement e-government due to its significant benefits, which include several key points:

1. Digital administration contributes to reducing the time required to complete transactions and minimizing costs and effort. This is achieved by striving to eliminate traditional administrative routines that hinder the efficiency of the administrative apparatus in countries, lead to the waste of employee energies and the depletion of financial resources due to excessive reliance on paper, documents, and signatures, in addition to the suffering endured by citizens under these procedures [23].
2. It contributes to supporting the decision-making process by providing information continuously and quickly to decision-makers, thus enhancing the effectiveness and accuracy of decisions in a timely manner [24].
3. Digital management contributes to combating corruption by reducing direct contact between management staff and clients, thus limiting negative behaviors that may arise as a result of such direct contact [25].
4. Digital transformation contributes to enhancing administrative efficiency by simplifying service delivery procedures and streamlining processes and transactions within the public sector, thereby strengthening interaction between management and its clients. This transformation also enables transparent access to data and information, which contributes to increased trust and ensures the quality of services provided [26].
5. Overcoming the problem of bureaucracy in its rigid sense [27].
6. Digital transformation enables the handling of a larger number of customers at the same time, unlike traditional management which has a limited ability to complete transactions, often forcing customers to wait in queues for long periods.
7. The importance of digital transformation stems from the poor quality and complexity of services in many departments, which necessitates resorting to digital means as a necessity to improve the quality of these services and facilitate access to them.

Digital Transformation Requirements

The shift to digital management represents a comprehensive transformation affecting the concepts, theories, methods, procedures, structures, and legislation upon which traditional management is based. This transformation is not a ready-made model or an imported solution that can be directly transferred and applied; rather, it is a complex process requiring an integrated system encompassing technical, informational, financial, legislative, environmental, and human dimensions, as well as building societal awareness to ensure its success, among other things. Therefore, the success of digital transformation requires a comprehensive set of requirements to ensure its effective implementation in practice [28]. The following will briefly address the most important of these requirements.

First, political support: Political support is one of the essential requirements for the success of the e-government project, as the political leadership plays a pivotal role in guiding this project by providing support at various governmental levels, while ensuring the involvement of citizens and meeting their needs. This support also contributes to strengthening cooperation between government institutions, highlighting the commitment of higher authorities to the necessity of implementing and monitoring digital government projects, and re-engineering procedures to align with citizens' requirements and enhance the efficiency of public services [29].

Secondly, developing strategies and establishment plans: It is one of the fundamental pillars for the success of the e-government project, and this requires the formation of a specialized body or agency concerned with planning, follow-up and implementation, in addition to preparing the necessary plans to activate this project. It also requires the assistance of advisory and research bodies to develop general specifications and standards for electronic management, and to ensure integration and compatibility between data and information exchanged between the various concerned parties.

Thirdly, community awareness: To successfully implement digital transformation at the organizational level, raising awareness and building a digital culture among community members is crucial. A lack of this awareness can lead to wasted administrative efforts, material resources, and

[20] Yousef bin Jassim Al-Hamili, The Reality of Computer Use in the Government Sector, Kingdom of Saudi Arabia, Research Center, Institute of Public Administration, 2005, page 39.
[21] Eidoni Kafia, Ben Hajouba Hamid, previous source, p. 219.
[22] Ahmed Hassan Ibrahim, Digital Transformation: A Qualitative Leap Towards Liberation from Bureaucracy and Administrative Corruption, Economics and Accounting Magazine, Trade Club, Egypt, Issue 676, October 2019, Page 9.
[23] Ahmed Mohamed Marjan, The Role of E-Government and Local Administration in Improving Public Services, A Comparative Study, Dar Al Nahda Al Arabiya, Second Edition, 2010, Page 83.
[24] Eidoni Kafia, Ben Hajouba Hamid, previous source, p. 224.
[25] Howaida Mahmoud Ibrahim Abu Al-Gheit, Developing Services in Local Units through the Employment of E-Government, Master's Thesis, Sadat Academy for Administrative Sciences, Cairo, Egypt, 2005, p. 78.
[26] Alaa Abdul Razzaq Al-Salmi, Electronic Management, Dar Wael Publishing, Amman, Jordan, 2008, p. 37.
[27] Kulthum Muhammad Al-Kubaisi, Requirements for the Application of Electronic Management in the Information Systems Center of the E-Government in the State of Qatar. Thesis submitted in partial fulfillment of the requirements for the Master's degree in Labor Management, Virtual University, Arab British Academy for Higher Education, 2008, page 39.
[28] Musa Abdul Nasser, Muhammad Quraishi, The Contribution of Electronic Management to the Development of Administrative Work in Higher Education Institutions, University of Biskra, Algeria, Al-Bahith Journal, Issue 920, 2011, p. 90.
[29] Jawad Al-Nadawi Ban Qasim, The Impact of Resistance to Change and Database Unification on the Success of E-Government Implementation: An Applied Study on Jordanian Ministries, Master's Thesis, Mu'tah University, Jordan, 2010, p. 19.

technology, especially if service users are not sufficiently aware of the importance of this transformation and unable to navigate its mechanisms when requesting or interacting with services.

Fourth, legal requirements: The transition to e-government necessitates the establishment and updating of the necessary legal framework to keep pace with developments. This involves enacting laws, regulations, and procedures that facilitate the transition and support adaptability. The majority of existing legislation was developed within traditional contexts that relied on direct interaction between employees and service recipients, as well as on paper documents and official certificates. Therefore, the success of e-government requires a new legal and legislative environment that aligns with its digital nature. This includes establishing legal rules that guarantee the security of electronic information and defining the procedures and penalties for those involved in cybercrimes.

Countries have realized the critical importance of legal regulation for the digital transformation process, and have sought to issue legislation to secure this transformation within government departments in order to establish trust and security among the public dealing with those departments.

In Egypt, several laws have been issued to regulate transactions conducted through modern digital means, the most prominent of which are the following:

1. Law No. 15 of 2004 concerning the regulation of electronic signatures and the establishment of the Information Technology Industry Development Authority was the first legislative attempt to regulate electronic transactions in Egypt, as this law gave legal validity to both writing and electronic signatures in transactions, recognizing them as reliable means of proof and official dealings.
2. Law No. 175 of 2018 on Combating Information Technology Crimes in Egypt represents a qualitative leap in the legal protection of digital systems. This law stipulates numerous forms of protection, in addition to measures that guarantee the protection of digital systems, whether public or private. This protection is manifested in the criminalization of a wide range of acts, from unauthorized access to or remaining in these systems to criminalizing all forms of attacks against them.

In Iraq, a special legislation was issued to regulate electronic signatures and electronic transactions No. (78) of 2012, which aims to provide the regulatory and legal framework for the practice of electronic signatures. This legislation came to enhance confidence in electronic transactions, and it is considered the legal basis regulating electronic signatures and digital transactions. Instructions to facilitate its implementation were published in the Iraqi Gazette in issue 4826 of 2025.

The draft cybercrime law in Iraq remains the subject of extensive debate between two opposing viewpoints. The first viewpoint bases its position on the necessity of adopting legislation as a tool to confront growing cyber threats and ensure digital security. Conversely, the second viewpoint warns of the potential consequences of its enactment, which could restrict public freedoms and fundamental rights guaranteed by the constitution. Until a balanced legislative formula is reached that reconciles the requirements of digital security with the guarantee of respect for constitutional rights, the draft will remain under review and subject to amendment. Therefore, the Iraqi legislature must expedite its enactment to ensure effective protection of the digital system in Iraq.

Fifth, technical requirements: Technical requirements are fundamental to the success of the transition to digital administration. Providing the necessary material resources and modern technological tools is crucial for implementing this administrative model. These requirements constitute the infrastructure upon which digital transformation is based, primarily computers, communication networks, information systems, and other technologies that enable the administration to create official electronic platforms through which public services are delivered to the public more efficiently and effectively. The technological dimension is the cornerstone for ensuring the success of the public administration's digital transformation project, as it is a pivotal and indispensable factor for activating this system and guaranteeing its smooth operation.

It is crucial to emphasize the need for e-government to integrate with various forms of digital technology, including media, networks, tools, and advanced technologies. This is due to the rapid pace of digital technology development and its diverse forms, which provides management with multiple and continuous options, including the ability to connect certain business or administrative activities to mobile phone services via the internet, using technologies such as SMS and modern communication protocols [30].

Some of the physical components of the technical infrastructure for electronic management can be classified as follows:

1. Computer hardware and its components.
2. Networks.
3. Communication technologies.

The government must also play an active role in encouraging citizens to acquire modern technologies, enabling them to engage positively with the demands of digital transformation. This can be achieved by providing the necessary support, particularly through policies aimed at reducing the costs of acquiring these technologies, especially communication and internet services, thereby ensuring equal digital opportunities and promoting equitable access to technology [31].

Sixth, security requirements: Ensuring cybersecurity and guaranteeing electronic confidentiality is of paramount importance, as it is essential for protecting national and personal information and safeguarding electronic archives from any potential breaches or manipulation. This aspect is particularly significant given its direct impact on national security and the personal security of both the state and individuals. This is achieved through the adoption of effective technical and legal measures, such as incorporating security elements into network protocol software, using electronic signatures, or employing strong passwords, thereby guaranteeing the integrity and reliability of the digital

[30] Sari Awad Al-Hasanat, Obstacles to Implementing Electronic Management in Palestinian Universities, Master's Thesis in Educational Studies, Specialization in Educational Administration, Arab League University, Cairo, p. 57.

[31] Iman Muhammad Al-Azab, E-learning: An Introduction to Traditional Training, Arab Organization for Administrative Development, Cairo, 2003, p. 86.

environment [32].

Seventh, human requirements: The human element is considered the most important resource that can be invested in to achieve success in any project and in any organization. Therefore, the human element is of great importance in implementing digital transformation, and it is necessary to prepare specialized technical human cadres to make this transformation a success.

Therefore, various government institutions and departments must implement change and development processes for their human resources to enable them to adapt to this transformation. This is because employees often resist what they lack knowledge about, necessitating their retraining and skills development to ensure they do not become an obstacle to the change process [33].

Experimental studies have proven that the availability of optimal tools and advanced equipment is not a sufficient guarantee for achieving the desired goals. Rather, it necessarily requires the existence of specific institutional efficiency, well-thought-out strategic preparation, as well as the commitment of administrative leaders to perform their tasks efficiently.

In this regard, data shows that investing in human capital—through motivation, training, organization, and capacity building—is a crucial mechanism for enhancing the effectiveness of public administration, even in the face of limited material resources and infrastructure. Rationally managed human capital can compensate for a relative lack of material resources, thus contributing to national developmental success [34].

Preparing and training employees is essential to overcome the fear associated with change. It has been observed that digital transformation, with its accompanying technologies, poses a source of anxiety for long-serving employees who lack the necessary knowledge and experience, leading them to resist rather than learn. Therefore, it is crucial to address this challenge through continuous professional development and by removing those who hinder progress, thus paving the way for more qualified personnel capable of meeting the demands of this new era [35].

In conclusion, the transition to a digital system requires greater investment in human capital than in material resources, which necessitates a set of measures, foremost among them the following [36]:

1. Radically restructuring and developing personnel departments in terms of organizational structure, guidelines, tasks, and methods, in line with the requirements of digital transformation and to enhance their operational efficiency.
2. Developing comprehensive human resources plans that identify the experiences and skills required for jobs, classify them accurately, and establish clear performance standards that ensure the selection of the most suitable candidates for these tasks.
3. Developing comprehensive human resources plans that identify the experiences and skills required for jobs, classify them accurately, and establish clear performance standards that ensure the selection of the most suitable candidates for these tasks.
4. Identifying training needs according to proven analytical methodologies and ensuring the quality of outputs.

Second Axis

The impact of digital transformation on public utilities

Digital transformation in public administration represents a qualitative leap and a methodological revolution in the methods of managing public institutions and administrations, through the adoption of advanced digital technologies that contribute to improving the quality of services provided, and enhancing the level of accuracy and transparency, which positively impacts the efficiency of public facilities and the effectiveness of their management.

Given the continued reliance of individuals on public facilities to receive basic services on a regular basis, this requires ensuring the continuity of these facilities' performance of their function while providing a level of service that meets the public's expectations and achieves its satisfaction.

From this perspective, legal jurisprudence has settled on a set of fundamental principles governing the operation of public utilities. These principles are based on practical considerations dictated by the necessities of the public interest and the requirements of justice. In legal literature, these principles are known as the governing principles of public utilities, and they are:

1. The principle of regularity and continuity of public facilities.
2. The principle of equality of individuals in benefiting from public facilities.
3. The principle of public utility development in accordance with the public interest [37].

These principles do not require separate legislation for their adoption, as the very nature of public utilities necessitates ensuring their smooth and continuous operation. This is essential for achieving the public good, which is their primary objective [38]. This stems from the nature of the role played by public utilities and the fundamental services they provide to the public, which are crucial for maintaining public order. Their disruption or cessation, even temporarily, leads to significant harm and inconvenience, affecting the interests of individuals on the one hand and undermining public order on the other. Therefore, ensuring the continuity and smooth operation of public utilities is among the most prominent

[32] Mohammed bin Saeed Mohammed Al-Arishi, Master's thesis in Educational Administration and Planning, Umm Al-Qura University, Kingdom of Saudi Arabia, 2008, p. 64.

[33] Safaa Fatouh Jumaa, The Responsibility of the Public Employee within the Framework of Implementing the Electronic Management System, Dar Al-Fikr Wal-Qanun, Mansoura, Egypt, 2014, p. 32.

[34] Rabi' Anwar Fath Al-Bab, The Relationship Between Politics and Administration, An Analytical Study in Positive Systems and Islam, Dar Al-Nahda Al-Arabiya, p. 46.

[35] Majed Ragheb Al-Helou, Public Administration Science and Principles of Islamic Law, previous reference, p. 421.

[36] The person (excluding the administrator) who holds a title or regardless of the title holds one or more of the following positions in a local bank or, in the case of a foreign bank, in the bank's branch in Iraq: Chairman of the Board, General Manager, President, Chief Executive Officer, Chief Operating Officer, Chief Financial Officer, Chief Lending Officer, or Chief Investment Officer, as well as the term "senior bank employee" includes any other person required by the Central Bank of Iraq to comply with the requirements stated in paragraph (4) of Article (18) of this law, in addition to any person related to the senior bank employee up to the first or second degrees or any spouses and children of such persons.

[37] Muhammad Ali Jawad, Principles of Administrative Law, Al-Sanhuri Library, Beirut, Lebanon, 2010, pp. 78-79.

[38] Malika Al-Saroukh, Administrative Law, A Comparative Study, Al-Najah Al-Jadida Press, Casablanca, 1996, p. 56.

responsibilities of public authorities [39].

These principles remain fundamental and essential in both administrative systems: traditional and digital, as they stem from the legal essence of administrative work and its desired purpose, without being related to the operational mechanisms used – whether digital or traditional – in carrying out administrative tasks.

Therefore, we will divide this topic into two sections. The first section will address the impact of digital transformation on the principles of public utilities. The second section will address the impact of digital transformation on the work of public utility employees.

The impact of digital transformation on the principles of public utilities

The legal framework governing public utilities ensures their unity and consistency, guaranteeing the continuity of their service delivery. This is based on the understanding that their primary purpose is to adequately and consistently meet public needs and provide essential services to individuals within society [40]. The principle of public utilities' neutrality is intrinsically linked to the principle of equality before the law, whereby these utilities are managed according to objective criteria, free from personal considerations, as a safeguard for enhancing their efficiency in serving the public good. This principle also requires distributing services to all beneficiaries without discrimination based on political affiliation, ethnic origin, religious beliefs, or ideological orientation. Undoubtedly, providing public services electronically, with minimal or no direct intervention from staff, will contribute to improving service quality and facilitating access to them. This type of service enables the applicant to access the electronic platform and request the service at any time, without the need for direct interaction with employees. The citizen can be provided with a service via telephone or computer 24 hours a day without being bound by working hours or official holidays. On the other hand, this digital transformation contributes to reducing illegal practices, especially bribery and extortion, which enhances respect for the legal principles regulating the operation of public facilities and enshrines the values of transparency, integrity and efficiency.

Public facilities are established to satisfy public needs and achieve public benefit. These needs and benefits are ongoing, which necessitates the continued and regular operation of the public facility to meet them, because these needs and benefits are not satisfied simply by the existence and regularity of the public facility in fulfilling them for a specific period of time. This is one aspect.

On the other hand, when individuals know of a facility that provides them with a specific service, they will arrange their daily affairs based on the facility's existence and continued operation. If any disruption occurs in the facility's operation, this directly affects citizens, impacting their daily lives[41].

Implementing an electronic (digital) system for public utilities contributes to strengthening the principle of continuous service delivery by eliminating traditional time constraints related to the opening and closing times of administrative offices. Under this system, the utility operates according to a sustainable operational mechanism that allows for the provision of services around the clock, without interruption or suspension, except in cases of force majeure such as unforeseen technical malfunctions in the adopted technological infrastructure, which temporarily hinder beneficiaries' access to the service [42].

Furthermore, the implementation of digital transformation enables employees to respond to citizens' inquiries via email, even from their homes. Many public services are now offered online, including those provided by the Ministries of Interior, Industry, Taxes, Education, and other government entities. The COVID-19 pandemic clearly demonstrated the critical importance of adopting these digital methods, as they ensure the continuity of service delivery and uninterrupted access, even under exceptional circumstances that might disrupt traditional administrative processes.

In addition, the digital transformation of the public utility will overcome the risks that threaten the operation of public utilities, which are represented by strikes, as one of the most important obstacles facing the principle of the continuity of the operation of the public utility.

A strike is when some or all employees or workers of a public facility stop working as a means of pressuring management to express dissatisfaction with a particular matter, improve working conditions, or engage in a specific activity [43]. Strikes are among the most serious factors that can threaten the continuity and regularity of public services, which has prompted legislative intervention in most countries to regulate them legally, especially with regard to vital functions of paramount importance to the state, in order to achieve a balance between the right to strike and ensuring the continuity of public service [44]. Legal systems have varied in their stances towards strikes. While some legislations have moved towards prohibiting them absolutely and considering them a criminal act punishable by law, other systems have permitted them, subjecting them to legal regulation that imposes specific restrictions and controls on employees when exercising them, in order to ensure a balance between exercising the right to strike and the requirements of the public interest [45].

Therefore, the implementation of digital transformation of the public facility did not prevent employees from exercising their right to strike, but rather its impact on the regularity and continuity of the public facility's operation becomes minimal, because digital transformation reduces the need for a large number of employees, in addition to criminalizing employee strikes in strategic public facilities.

The impact of digital transformation on the principle of equality of individuals before public institution: The principle of equality means non-discrimination between members of the same sect if their legal status is the same [46], This means

[39] Nassira Al-Hayouni, Public Utility between Traditional Controls and Modernization Requirements, Publications of the Journal of Legal Sciences, Administrative Jurisprudence Series, Issue 7, 2018, p. 79.

[40] Naktal Ibrahim Abdul Rahman, Electronic Administration and its Impact on Public Utilities, Journal of the College of Law for Legal and Political Sciences, Volume 9, Issue 35, 2020, p. 46.

[41] Maher Saleh Alawi, Principles of Administrative Law "A Comparative Study", no publisher, Baghdad, 2009, p. 93.

[42] Zhigan fang E- government Indigital: Concept. Practice. Paris. 2002.P.14.

[43] Muhammad Anas Qasim Jaafar, Administrative Activity, Dar Al Nahda Al Arabiya, Cairo, no edition, 1996, p. 49.

[44] Suhaib Yasser Mohammed Shaheen, Onissi Linda, The Impact of E-Government on the Principles of Public Service Operation, Al-Bahith Journal for Academic Studies, Faculty of Law and Political Science, University of Batna, Volume 8, Issue 3, 2021, p. 80

[45] Majed Ragheb Al-Helou, E-Government and Public Utilities, previous reference, p. 25.

[46] Muhammad Fuad Abdul Basit, Administrative Law, Dar Al-Fikr Al-Jami'i, Alexandria, no date of publication, p. 359.

that all individuals who are in the same legal position must be treated in the same way without discrimination between them [47], Exceptions may be made and certain privileges granted to some individuals based on laws and regulations, and this does not contradict the principle of equality [48].

The functional neutrality of public utilities is fundamentally linked to the principle of equal access to their services. This means regulating the management of these utilities according to objective and impartial standards, free from personal considerations or conflicts of interest, within the framework of the legal and constitutional regulations governing their operation. This principle aims to enhance the operational efficiency of public utilities in a way that serves the public interest, while ensuring the equitable distribution of services to all beneficiaries without discrimination based on political affiliations, ethnicity, religion, or ideology [49]. This equality before public services is not absolute and unrestricted, but rather conditional upon the similarity of legal positions and the availability of the necessary conditions and circumstances for benefiting from these services. Respect for this principle is subject to the oversight of the administrative judiciary, which has the power to annul any administrative decision that violates the principle of equality, and is also entitled to award compensation to individuals who have suffered harm as a result of this principle being breached [50].

Accordingly, the neutrality of public facilities requires that they be operated in a way that fulfills the requirements of the public interest and takes into account the needs of those who benefit from their services, without becoming a tool in the hands of those managing them to achieve private interests or to promote specific individuals or entities, thus ensuring their independence and objectivity in performing their public functions [51].The principle of equality before the law derives its legal basis from the very nature of the establishment of public facilities. These facilities are established with public funds to meet public needs, and therefore entail the obligation not to discriminate between individuals in benefiting from their services, provided they meet the same legal conditions and fulfill the requirements for benefiting from the service, including the obligation to pay the associated fees, if any [52].

The use of digital transformation by public utilities promotes equality before the law. By employing electronic means in their interactions with service recipients, they eliminate or reduce discrimination, particularly that based on personal relationships, kinship, or political affiliations. The absence of direct interaction between service providers and beneficiaries enhances the objectivity of service delivery. Consequently, those with the ability to use electronic means can obtain the required service without human intervention that could lead to discrimination, thus reinforcing the principle of equality and limiting opportunities for deviation from the requirements of administrative neutrality [53].

Restricting access to certain public facilities to a specific category of individuals does not constitute a violation of the principle of equality, as long as this discrimination is based on objective grounds and legal justifications. For example, requiring a minimum grade point average for admission to universities, or restricting access to research center services to researchers, are forms of legitimate regulation of public service. Furthermore, the difference in electricity prices according to the nature of the use, whether residential or industrial, does not constitute a violation of equality. Differentiating between categories of beneficiaries based on social considerations, such as granting facilities to students, the poor, the children of martyrs, or people with special needs, is considered legitimate positive discrimination that aims to achieve social justice without violating the principle of equality before public facilities [54].

It can be inferred from the aforementioned legal principles that adopting mechanisms for digitizing services within the public sector contributes to enhancing their functional neutrality and ensuring the fair application of the principle of equal access to their services among all beneficiaries, through standardizing procedures and eliminating subjective factors. Electronic means, with their inherent transparency, create an institutional balance that prevents discrimination among individuals who meet the regulatory requirements for access and fulfill their financial obligations. This approach also ensures the insulation of management from personal influences by limiting direct human intervention, which could create an environment conducive to deviations from standards or favoritism towards specific groups, thus aligning with the founding objectives of public utilities based on achieving distributive justice.

The impact of digital transformation on the principle of public utility adaptability and changeability: The administration has the authority to amend the organization of public utilities at any time and through various means, enabling it to keep pace with scientific and technological advancements and adapt to the demands of the times. This comes within the framework of adopting modern management methods, empowering public utilities to absorb technological developments, particularly in the field of digital transformation, in a way that leads to providing services to beneficiaries with high efficiency, effectiveness, and quality, and that achieves the principles of flexibility and continuity in the performance of the public utility [55]. The administration has the authority to intervene at any time to amend or change the rules governing the public utility, whenever the public interest requires it. This intervention aims to ensure the utility operates at the highest level of efficiency under prevailing circumstances. This right is an inherent right of the administration and does not require explicit stipulation, even in cases where the utility operates

[47] Khaled Khalil Al-Zaher, Administrative Law, Administrative Activity, Dar Al-Maysar for Publishing, Distribution and Printing, Jordan, 1997, p. 48.

[48] Ibrahim Abdel Aziz Shiha, The Co Ibrahim Abdel Aziz Shiha, A Concise Guide to Administrative Law Provisions According to Jurisprudential Practice and Judicial Rulings, Book One, Faculty of Law, Alexandria University, 1st Edition, 2012,p.279.

[49] Majed Ragheb Al-Helou, E-Government and Public Utilities, previous reference, p. 28.

[50] Majed Ragheb Al-Helou, Administrative Law, University Press, Alexandria, no publication date, p. 430.

[51] Ikram Abdel Hakim Mohamed, The Effects of Electronic Management on the Principles of Public Utilities, Journal of Jurisprudential and Legal Research, Damanhour, Issue 47, October 2024, p. 2525.

[52] Rahmani Sanaa and others, The impact of electronic management on the basic principles governing the public utility, previous reference, p. 8.

[53] Daoud Abdul Razzaq Al-Baz, E-Government and its Effects on the Legal System of the Public Utility and the Work of its Employees, previous reference, p. 137

[54] Ikram Abdel Hakim Muhammad, The Effects of Electronic Management on the Principles of Public Utilities, previous reference, p. 2527.

[55] Dawood Abdul Razzaq Al-Baz, Electronic Government and its Impact on the Legal System of the Public Utility and the Work of its Employees, previous reference, p. 149.

under a concession system, despite the fact that the administration is not the actual operator. This stems from the public nature of the utility and its close connection to serving the public good [56].

Furthermore, the proper operation of a public facility should be sound not only legally, by complying with existing legal rules, but also technically, by adhering to available technological standards and keeping pace with modern global applications. It is unreasonable for public authorities to remain passive, oblivious, or indifferent to the digital transformation that has begun to permeate various public facilities in the developed world, providing people with more efficient and precise public services [57].

Based on the foregoing, applying the principle of adaptability and flexibility in public utilities empowers management to transition from traditional to digital administration. This is in response to the demands of the public interest, particularly its financial aspects, which necessitate modernizing these utilities, equipping them with appropriate technology, and upgrading their functional structures to adapt to the evolving digital environment. Therefore, adopting an electronic system is a practical embodiment of this principle and represents the most prominent manifestation of public utilities keeping pace with technological advancements and contemporary administrative developments. Employees cannot reject this system by claiming the stability of their legal positions [58]. Public utilities must strive to provide their services to beneficiaries with the highest level of efficiency and effectiveness, by keeping pace with modern developments and innovations in society, and employing contemporary technologies in the management and operation of these facilities. This will enable them to respond to the increasing demand for their services and keep pace with the expansion in their scope, in order to achieve the principle of the continuity of the public utility and elevate it to the level of the beneficiaries' aspirations [59].

The impact of digital transformation on the work of public facility employees: The public employee is the cornerstone of the state's administrative structure. Public employees constitute the executive instrument for the legislator's will, translating it into practical reality and giving it tangible legal existence. Since employees represent the essential human element necessary for managing public facilities and achieving their objectives, the digital transformation underway in the public sector necessitates their qualification and training in the use of modern technologies to ensure efficient performance and keep pace with technological advancements [60].

Below we will discuss the effects of digital transformation on the work of public utility employees:

A-The impact of digital transformation in overcoming administrative bureaucracy problems: The shift towards digitalization and remote service delivery facilitates beneficiaries' access to relevant authorities and enhances communication effectiveness, resulting in greater convenience and ease compared to traditional in-person service or direct contact. This transformation also leads to faster transaction processing and increased citizen satisfaction, while saving time and effort for service seekers. Consequently, it reduces administrative complexity and minimizes bureaucratic obstacles that hinder institutional performance [61].

The evolving landscape of public facility management has necessitated the adoption of modern concepts that liberate employment from the constraints of traditional time and place, as digital technologies have become integral to the work system. Employees are no longer bound by their physical workplace, no longer required to arrive at and leave at specific times. The standard of commitment is now fulfilling assigned tasks remotely – even from home – where the focus is on the virtual, legal presence of the workplace, not the physical presence of the employee. This empowers employees to perform their duties remotely, provided they can complete their assigned tasks electronically.

The digital management system ensures the continuous provision of services around the clock, enabling beneficiaries to access them easily and at any time, seven days a week, without interruption [62].

Furthermore, implementing the digital system would bring about fundamental changes in the administrative structure, including eliminating the tasks of the traditional registry employee and records, and abolishing manual attendance and departure procedures, by replacing them with electronic systems based on smart cards, thus enhancing efficiency and reducing human intervention in administrative processes [63].

In conclusion, adopting the digital system effectively contributes to reducing bureaucratic manifestations and alleviating the severity of administrative routine in the performance of public facilities' functions, by replacing paper transactions with their electronic counterparts, which leads to the transformation from a traditional work environment based on paper documents to an integrated digital environment in requesting and providing the service, without the need to travel to the headquarters of departments or wait in queues, thus achieving efficiency and speed in providing the public service.

B - The impact of digital transformation on achieving administrative transparency and eliminating administrative corruption: Digital transformation enhances transparency and administrative democracy by facilitating access to information, developing the relationship between state authorities and their public administrations, and achieving transparency in the digital system through:

1. Achieving effective communication between the service provider and the beneficiary.
2. Reducing the potential for administrative corruption.

[56] Majed Al-Helou, Administrative Law, University Press, Alexandria, no publication year, p. 433.
[57] Saad Abbas Hamza Al-Khafaji, E-Government and its Theoretical Dimensions and Implementation Mechanisms, An Applied Study on the Use of E-Government in the Kirkuk Cement Plant, Baghdad College of Economic Sciences University Journal, Issue 23, 2010, p. 58.
[58] Rahmani Sanaa *et al*., The impact of e-government on the fundamental principles governing the public utility, previous reference, p. 9.
[59] Ashraf Gamal Mahmoud Abdel-Aati, Electronic Management of Public Utilities, previous reference, p. 226.
[60] Jean Louis moren. La fumction publique. Paris. Librairie General de Droit et de Juris prudence. 2000. P. 9.
[61] Basma Manwar Marzouq Wahiba, Electronic Management Applications in Public Administrations, Master's Thesis in Facilitation Sciences, Faculty of Economic, Commercial and Facilitation Sciences, Department of Public Administration, Algeria, 2018, p. 60.
[62] Ikram Abdel Hakim Mohamed, The Impact of Electronic Management on the Principles of Public Utilities, previous reference, p. 65
[63] Safaa Fatouh Jumaa, The Responsibility of the Public Employee within the Framework of Implementing the Electronic Management System, Dar Al-Fikr Wal-Qanun, 2014, Mansoura, Egypt, p. 69

3. Ensuring fairness in the distribution and provision of public services.
4. Reducing the volume of documents exchanged between parties, thereby saving time and expediting service delivery procedures.

Eliminating administrative corruption within public facilities is one of the most prominent positive effects resulting from the implementation of digital transformation.

The main causes of administrative corruption are attributed to the nature of the traditional system used in managing public facilities, which are:

1. **Administrative Overstaffing:** Administrative overstaffing is a symptom of dysfunction in public administration, manifested in a number of employees exceeding actual operational needs. Many departments, particularly in developing countries, suffer from excessive staffing due to haphazard hiring practices. Furthermore, some administrative leaders resort to appointing their supporters and allies without regard for competence or the actual needs of the public service [64].
2. **Primitive Administrative Systems:** Primitive administrative practices refer to the reliance on traditional policies and methods that hinder keeping pace with the administrative and technological advancements witnessed in developed countries [65]. This is evident in the continued use of outdated organizational structures within administrative bodies without review or modernization to keep up with developments in management and information technology. This structural rigidity has contributed to some employees engaging in corrupt administrative behaviors, exploiting the shortcomings of these structures and the resulting procedural complexities and sluggish performance of administrative bodies [66].

Traditional methods of managing public facilities, with their inherent shortcomings, have been a primary driver for adopting digital transformation as an alternative aimed at addressing these imbalances, most notably the phenomenon of administrative corruption. A 2011 World Bank report confirms that corruption is one of the most significant obstacles hindering economic and social development. Studies have shown that for every one standard deviation improvement in the corruption index, the investment rate increases by more than four percentage points, and the average per capita share of the gross national product rises annually by more than half a percentage point [67].

Digital transformation has had a tangible positive impact on reducing some forms of administrative corruption [68]. The digital system has enabled the completion of transactions electronically, allowing service seekers to access the administrative body's website, specify the required service, and review its stages, procedures, and associated costs. This eliminates the need for direct contact between the employee and the service seeker, thus reducing opportunities for corruption offenses such as bribery and other illicit practices [69].

Digital transformation contributes to eliminating administrative corruption through [70]:

1. Providing public services through a pre-organized digital system enables citizens to access these services around the clock, without the need for direct intervention from employees, which contributes to achieving the principle of continuity of public facilities and raising the efficiency of administrative performance.
2. Human resources are employed according to objective standards based on professional merit, scientific and practical qualifications, while ensuring complete impartiality and excluding any subjective considerations or favoritism.
3. Transparency is enhanced in completing administrative transactions by following specific and documented procedures within the digital management system, ensuring no bias or discrimination among beneficiaries of public services.
4. Citizen participation contributes to addressing the negative aspects by facilitating mechanisms for surveying their opinions on digital management issues, in promoting the principle of transparency and accountability, and involving beneficiaries in developing and improving the performance of public facilities in accordance with the requirements of good governance.
5. It contributes to reducing the administrative, organizational and social problems that pave the way for bribery practices and the offering of illicit gifts, by strengthening the controls and oversight mechanisms that ensure transparency and integrity in the course of administrative work.

A 2016 United Nations report indicated a close relationship between the level of e-government development and the Corruption Perceptions Index. Countries with high levels of corruption in their public administration demonstrate poor performance in providing e-services and making open government data available. According to the "Investment Climate in Arab Countries 2016" report issued by the Arab Investment and Export Credit Guarantee Organization, investment attractiveness criteria are divided into three main groups, each including a number of indicators. Among these is the e-government index, which falls under the indicators of excellence and technological advancement, and the corruption control index, which is considered an indicator of

[64] Salah al-Din Fahmi Mahmoud, Administrative Corruption as an Impediment to Social and Economic Development Processes, Arab Center for Security Studies and Training, Riyadh, Saudi Arabia, 1994, p. 113.

[65] Muhammad Muhammad Abdul Wahab, Bureaucracy in Local Administration, Dar Al-Jami'a Al-Jadeeda, Alexandria, 2004, p. 79.

[66] Mohamed El Fateh Mahmoud Bashir Al Maghrabi, Administrative Corruption: Its Causes, Effects, and the Most Important Methods of Combating It, a working paper presented at the Annual General Conference Towards a National Strategy for Combating Corruption in cooperation with the Ministry of Administrative Development, Transparency International, the Organization for Economic Cooperation and Development, and the Arab Organization for Combating Corruption, Cairo, July 2010, p. 241.

[67] Janshed J. Mistry and Abu Jalal, an empirical analysis of the relationship between e. government and corruption, the international of digital accounting research. Vol. 12. 2012 p. 147.

[68] Iman Abdel Fattah, The Confinement of Administrative Corruption Practices in Light of Government Electronic Management Applications, a research paper published in the General Annual Conference, Towards a National Strategy for Combating Corruption, Arab Organization for Administrative Development, July 2010, p. 346.

[69] Essam Abdel Fattah Matar, E-Government between Theory and Practice, previous reference, p. 58.

[70] Iman Abdel Fattah, The Confinement of Administrative Corruption Practices in Light of Government Electronic Management Applications, Previous Reference, p. 346.

the institutional environment. These are among the most prominent factors affecting the attraction of local and foreign investments [71].

Conclusion

In conclusion, it can be said that digital transformation represents a significant qualitative and civilizational leap in the course of human development, extending its impact to various economic, social, and political aspects. This makes its adoption an inevitable necessity imposed by the demands of the times on countries striving to keep pace with progress. Digital transformation is also an effective tool for reforming public administration and an essential means of improving the level of services provided by public utilities, thereby reinforcing the principles of efficiency, transparency, and quality performance in administrative work. Hence, there is an urgent need to enact special legislation that establishes clear legal frameworks to regulate this transformation and ensure its legalization in a way that keeps pace with technological developments, protects rights, and defines responsibilities in the digital environment.

Results and Recommendations

Results

1. It is noteworthy that the term "digital transformation" still lacks a precise and rigorous definition, due to its modern nature, comprehensiveness, and multifaceted dimensions. Despite serious scholarly attempts to formulate a sound definition for this concept, no precise definition has yet emerged that adheres to universal scientific and legal standards.
2. Implementing digital transformation within the public administration requires the availability of fundamental institutional foundations and legislative controls to ensure the achievement of the desired results.
3. A public facility is an organizational activity undertaken by the public administration with the aim of satisfying the general needs of citizens, in a regular and continuous manner that achieves the public interest.
4. The public utility in its traditional form is no longer able to keep pace with the transformations and challenges imposed by rapid technological development, which necessitates its reorganization and the modernization of its mechanisms in accordance with the requirements of the digital age.
5. The digital transformation of the public facility has become a practical necessity dictated by realistic considerations, and not a luxury option in public administration, in order to keep pace with the increasing demand for government services and ensure their efficient and high-quality delivery.
6. Digital transformation contributes positively to enhancing the performance of public facilities and to consolidating the legal rules that govern them, as it has resulted in the effective application of the basic principles that govern the operation of the public facility, especially the principles of regularity and consistency, and the principle of equality among individuals in benefiting from its services, as well as contributing to improving the efficiency of its operation and ensuring its ability to be developed and modified in line with emerging changes.
7. Digital transformation contributes to reducing negative behaviors that may be exhibited by some public employees, such as bribery, nepotism, and abuse of power, by reducing direct human intervention and enhancing transparency in public service delivery procedures.

Recommendations

1. The study highlights that the development of advanced digital infrastructure - especially in the field of communications networks - is a governing pillar for activating digital legislation, to ensure the quality of institutional connectivity and the security of data flow between the components of the administrative system, in accordance with the established legal guarantees.
2. Providing the basic requirements and the appropriate technical environment, by supporting the technological infrastructure of the public administration, including providing it with computers, other technical equipment, advanced communication networks, in addition to the digital services necessary to ensure the efficiency and continuity of performance.
3. The need for a suitable legislative and regulatory framework is one of the basic requirements for achieving digital transformation within government departments, which requires the Iraqi legislator to expedite the enactment of special legislation that regulates this transformation in public facilities.
4. Preparing and training public facility employees is one of the essential requirements for the success of digital transformation, as a lack of awareness and sufficient knowledge among employees may lead to rejection and resistance to change, turning them from a supportive element of the transformation process into an obstacle to it. This necessitates adopting comprehensive qualification programs to enhance their capabilities and enable them to adapt to the requirements of the new digital environment.

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[71] Report of the Arab Investment and Export Credit Guarantee Corporation, Investment Climate in Arab Countries, Guarantee Index for Investment Attractiveness, Kuwait, 2016, p. 26.

and Islam. Cairo: Dar Al-Nahda Al-Arabiya; n.d.
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