

## RESEARCH ARTICLE

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# The impact of digital transformation on improving internal communication Study condition institution Algerian Economic General Telecommunications Company

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### Abstract:

The communications sector in Algeria is witnessing a qualitative leap, as confirmed by the Information and Communications Technology Development Index. IDI Issued by the International Telecommunication Union (2023)Despite the progress achieved by this sector, it faces many challenges, as telecommunications institutions work to develop their businesses and improve the quality of their services in light of the intense competition and rapid technological development. To achieve this, it has become necessary for them to adopt new strategies that enable them to achieve their goals efficiently. Digital transformation is one of the most important of these strategies, which affects the entity of the institution as a whole, as it contributes to ensuring the optimal utilization of the institution's resources, especially internal ones (IT infrastructure, technical capabilities, information systems). (NEDIL, ZEROUTI, & KHOUATRA, 2022)In this context, this study came to Analyzing and measuring the impact of digital transformation with its three variables: (technical and human capabilities, leadership, digital strategy) on improving internal communication. For the institution General Ano Economic Algerian Telecommunications To achieve the objectives of the study, we used the descriptive approach. My analytical description, We adopted the

intentional sampling method through Distribution AnoI will explain on Sample of 80 employees Included Class And tires Middle and category sub ordinates, To process the obtained data, we used: Statistical Package for the Social Sciences (SPSS)Spss26,Among the most important results of our study is the emphasis on: The presence of a statistically significant effect at the significance level ( $0.05 \geq \alpha$ ) for digital transformation In its dimensions (Technical and human capabilities, leadership, digital strategy)To improve internal communication the institution Study location.

**Keywords:** Digitation, digital transformation, communication, internal communication.

### INTRODUCTION:

Business organizations, regardless of their nature of activity, seek to maximize their profits, consolidate their position, and deal with competition competently. This has prompted many of them to search for mechanisms and adopt strategic options that enable them to achieve their goals with high efficiency. Digital transformation is one of the most important of these strategic options, imposed by the rapid developments in the modern business environment. This is especially true after it became clear that

organizations that still rely on traditional methods to perform their functions, including planning, organizing, coordinating, monitoring, and evaluation, are experiencing many difficulties and an inability to withstand their competitors.

Includes The digital transformation project is the implementation of digital capabilities to support business model transformations. These transformations have touched on various organizational, structural, and other aspects. It affects the entire entity of the organization, both externally by bringing the organization closer to its external audience and improving its services and image, and internally, which is the aspect we will focus on in this study. Digital transformation is likely to impact operational processes and human resource management. And on The process of internal communication in the organization (upward communication, downward communication, horizontal communication), where The success of the digital transformation of the organization may It contributes to the emergence of new opportunities for sharing knowledge and information, intensifying interactions, and sharing work responsibilities among various Individuals organization and between Working groups in the Foundation In addition to ensuring that senior management is provided with the information they need to make timely decisions, without the need to be bound by...By procedures numerous and strict that imposed by nature Organizational structure For the institution and Which may make it inflexible.

With the emergence of this new style of work, which is mainly based on the use of means Digital communication, management must pay attention to achieving a deep understanding and clear vision for employees of how to use this means In performing their duties, and their formation to technically control HaThis ensures that the organization develops its performance and achieves its success and growth. This effort requires the presence of highly competent leadership within the organization, as digital transformation is a global project conditional on the role of

administrative leadership within the framework of the organization's strategy and policy. Thus, all of its functions are integrated, enabling it to benefit from the various available opportunities. (Braham & Belghaba, 2022) ,Especially those related to controlling and improving digital communication technologies. Quality Its internal communications, which enables it to improve its performance.

The institution is General Algerian economy For communications In particular Among the institutions that Seeking to Improve its internal communications Considering that most of its functions and services depend on the quality and effectiveness of the prevailing communication system, and to achieve this, the senior management is moving towards Embodying the digital transformation project of the institution, and in this study we will seek To connect Between digital transformation as an independent variable and internal communication As a dependent variable, it was formulated The fundamental question To study as Next: What is the impact of digital transformation on improving internal communication? **The institution Algerian Economic General Telecommunications Company?**

### **1. Sub-questions of the study:**

- What do we mean by digital transformation and internal communication?
- What is the effect? Capabilities(Human and Technical)To improve internal communication the institution Algerian Economic General Telecommunications Company?
- What is the effect? Leadership on improving internal communication the institution Algerian Economic General Telecommunications Company?
- What is the effect? Strategy to improve internal communication the institution Algerian Economic General Telecommunications Company?

### **2. Study hypotheses:**

#### **Main hypothesis:**

**H0**There is no statistically significant effect at the significance level ( $0.05 \geq \alpha$ ) for digital transformation to improve Intercom the institution Algerian Economic General Telecommunications Company;

H1: There is a statistically significant effect at the significance level ( $0.05 \geq \alpha$ ) For digital transformation to improve internal communication the institution Algerian Economic General Telecommunications Company;

### **Sub-hypotheses:**

**H0**There is no statistically significant effect at the significance level ( $0.05 \geq \alpha$ ) for capabilities(Humanity and Technology)To improve internal communication the institution Algerian Economic General Telecommunications Company;

H1: There is a statistically significant effect at the significance level ( $0.05 \geq \alpha$ ) for capabilities(Humanity and Technology)To improve internal communication the institution Algerian Economic General Telecommunications Company;

**H0**There is no statistically significant effect at the significance level ( $0.05 \geq \alpha$ ) To drive improvement of internal communication the institution Algerian Economic General Telecommunications Company;

H1: There is a statistically significant effect at the significance level ( $0.05 \geq \alpha$ ) To drive improvement of internal communication the institution Algerian Economic General Telecommunications Company;

**H0**There is no statistically significant effect at the significance level ( $0.05 \geq \alpha$ ) Digital strategy to improve internal communication the institution Algerian Economic General Telecommunications Company;

H1: There is a statistically significant effect at the significance level ( $0.05 \geq \alpha$ ) Digital strategy to improve internal communication the institution Algerian Economic General Telecommunications Company;

### **3. Study objectives:**

Through this study, we seek to know the level of practice of digital transformation .the institution Algerian Economic General Telecommunications Company This is achieved by shedding light on the most influential variables, primarily: physical and human technologies, leadership, digital strategy, and their impact on improving the organization's internal communications system. It also presents a number of proposals that would support the digital transformation of the organization under study and improve the quality of its internal communications.

### **4. Importance of the study:**

The importance of the current study stems from the importance of the topic itself, which links the independent variable "digital transformation" and the dependent variable "internal communication." Despite the many studies that have addressed these two concepts, no link has been made between them, to the best of our knowledge.us.

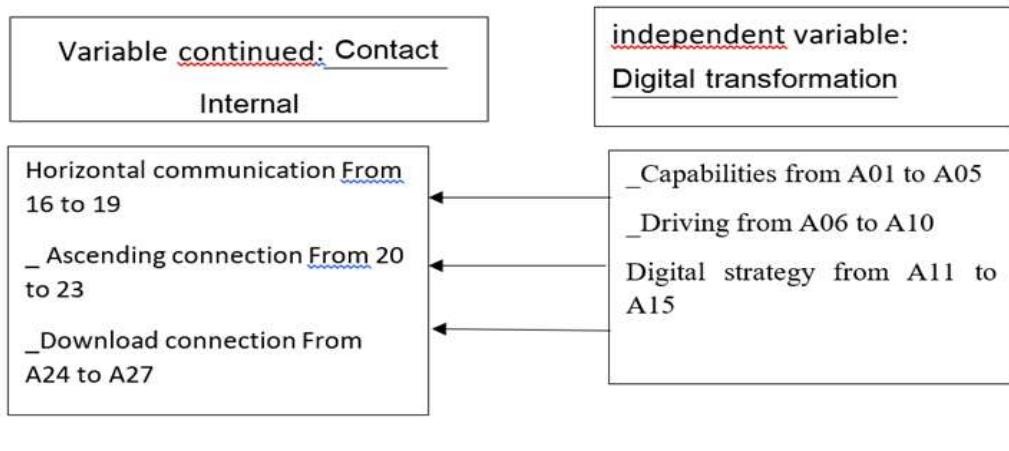
Digital transformation is one of the most important challenges that modern business organizations rely on to ensure their existence .Its stability And its leadership Especially in light of the rapid technological development and intense competition witnessed by the modern business environment, the institution is General Algerian economy For communications Among the institutions that care Keeping pace with these developments by moving towards digitizing its business and functions, which would allow for Improve communication quality Anterior, and In this context, we will try to provide a set of recommendations and suggestions that will achieve this.

### **5. Default study plan:**

Based on defining the study problem, its importance and objectives, we prepared the study plan, which clarifies the most important research variables, represented by the independent variable "digital transformation"

and the dependent variable “internal communication” as shown in Figure No. (01).

**Figure 01: Default study plan**



The source: Prepared by the researcher

### Firstly: Theoretical framework of the study:

#### 1. The concept of digital transformation:

Through our review of numerous literatures, we have observed conflicting opinions among researchers regarding the precise definition of the concept of digital transformation, in addition to pointing out the differences between it and the concept of digitization. Digital transformation requires conscious and prior planning to employ technology in the field of institutional and cultural transformation, while digitization is considered more isolated and is implemented without deliberate and coordinated effort..(Freeman, 2022)And you know **Digitization** That it is The ability to convert products or “Existing services into digital variants, thus offering advantages over tangible products.” (Henriette, Feki, & Boughzala, 2015).

**Knows digital transformation** It's the way you do it. founder Creating, transferring and capturing value as an entrepreneurial endeavor, as the application of digital technologies provides significant opportunities for organizations to expand their competitive advantage by allowing them to create and enhance their digital capabilities. (Buck, Clarke, Kevin C, & Desouza, 2023)It is also known as a business model adopted by an organization, which can lead to changes and modifications in either the product,

organizational structure, or process automation. It is the “profound transformation of business activities, organizations, processes, competencies, and models, to maximize the changes and opportunities of the technology mix and its accelerating impact on society, in a strategic and prioritized manner.” (Wang, Li, Tian, Zaku, & a Rani, 2023)While some researchers assert that the concept of digital transformation cannot be defined as the adoption and intensive use of modern communication technologies, it is a deeper concept that touches on various dimensions of the institution. Technological, organizational, and cultural. Blague points out that digital transformation includes economic models, value chains, the competitive environment, organizations and their functions, activities and businesses, methods of work and cooperation between employees within the organization, as well as the daily lives of employees. (Ait Errays & Tourabi, 2021)This is also confirmed by Matt and others who consider that digital transformation includes the application of digital technologies with the aim of changing key business processes. Products, leadership, organizational structures, and management concepts (Goerziga & Bauernhansla, 2017)

**In our study, we mean by digital transformation:** That's the model From the workers adopted by the Algerian Public

Economic Corporation the Driven by changes associated with the application of technology Contact Digital In performing the functions and activities of the institution, we will focus on studying the challenges of human and digital capabilities, leadership, digital strategy, and In all aspects of a For the administrative process, especially regarding leadership and digital strategy.

## **2\_ Definition of online communication**

The root of the word “communication” in Latin is communicate, which means to share, or to make common, Communication is defined as the process of understanding and sharing meaning.(2023)

Communication is a sense of the physical and psychological process due to the effects of the operation on the relationship between one or more people - the person - with one more person - the receiver – in the view of certain objects. (Kebaili, 2023)

\_ Internet communication is defined as a group of communication actions at the destination of the enterprise's employees. This function can be accessed by the communication service, either by the user or by the department of human resources. She develops non-vertical information flows (in the direction of the services), but also uses multi-direction channels: it facilitates the sharing of the information in the enterprise services and the values of the enterprise.( Mauléon & Gooding , 2015)

**In our study, we mean internal communication.: Total number of calls made within A For the Foundation Algerian Economic General Telecommunications Company It enables interaction between employees across various organizational levels, through the transfer and exchange of information, ideas, and feelings, using modern communication technology, thus contributing to the achievement of the organization's goals. It is important that the communication on the internet use more tools to improve and enhance the collaboration in the organization in the following way: the internet blogs' platforms, the social networks, the internet's sharing platforms, the microblogging, the wikis and the widgets and other diffusion outlets.**

(RSS),(Reguer, 2010)In our company, we also influence our search to use online blog formats that allow collaborative collaborations to create a personal blog and / or a theme to optimize digital communication and participate in a collective blog as an actual blog.

### **secondly: Applied framework of the study:**

#### **1 \_ Study methodology and tools:**

This study falls within the quantitative research, as it is a study Field study conducted on Sample of the Staff for the institution Algerian General Telecommunications Company ,We relied on it Survey method Because it is consistent with the subject of the study. It enabled us to monitor and understand employees' attitudes and opinions regarding the study variables: "Digital transformation "and" Intercom" In the institution under study, we also employed the questionnaire tool to collect data and information, as we relied in its design on Likert scale Five-point Likert Scale as follows: (strongly agree, agree, neutral, disagree, strongly disagree),And Includes 27 phrases It was distributed during The period extending from05Up to 25water2025.

#### **1.1Study community and sample:**

Be Study community of all employees for the institution General Economic Company of Telecommunications in Algeria, Due to the difficulty of studying all of its members, we chose a purposive sample consisting of 80employee, where We distributed the questionnaire to Its members, who are made up of a class worker how much (middle tires) and category Execution workers(subordinates).

#### **2.1Statistical processing methods:**

To process the obtained data, the Statistical Package for the Social Sciences (SPSS) program was used. SPSS 26, As the most appropriate tool for processing quantitative data, determining the nature of the relationship between variables, measuring the size of the effect, building predictive models, and verifying the validity of the study hypotheses, in this research of ours: We adopted the following statistical methods:

\_ Calculating Cronbach's alpha to ensure the reliability of the scale, and calculating the

Pearson correlation coefficient (**Person**) To measure the internal consistency of the questionnaire axes;

Calculating the arithmetic mean to determine the degree of agreement of the sample members with each statement, and the degree of agreement with the axis as a whole, as well as calculating the standard deviation to determine the extent of dispersion of the

sample members' answers from their arithmetic mean;

Calculating the correlation coefficient, one-way analysis of variance, and simple linear regression, to verify the validity of the study hypotheses.

### 3.1 Stability calculation:

The validity of the scale was confirmed by conducting the Cronbach's alpha test. Cronbach's Alpha, as shown in Table No. (01):

Table No. (01): Cronbach's alpha test reliability results	
Statistiques de fiabilité	
Alpha de Cronbach	Nombre d'éléments
0,91	27
The source Prepared by the researchers based on the program's outputs. <u>Spss v26</u>	

Table No. (01) shows the overall Cronbach's coefficient of reliability of the questionnaire, which amounted to: 0.919 is a high value that confirms the degree of reliability of the questionnaire and its validity to achieve the study objectives.

#### 4.1 Validity of the study tool:

The internal consistency of the scale was confirmed by calculating the Pearson correlation coefficient. **Person**) For the independent variable dimension "digital transformation" consisting of the following axes: (material and human capabilities, leadership, digital strategy), as well as the dependent variable dimension "internal communication" consisting of the following axes: (upward communication, downward communication, horizontal communication),

by highlighting the total score obtained in each of the axes forming these two dimensions and shown in the following two tables:

#### An Internal consistency results for the axes after digital transformation and the total score obtained in the dimension:

This dimension includes (15) phrases, with the aim of revealing the reality of practicing digital transformation. the institution Study site, To ensure the validity and reliability of the statements, we calculated the Pearson correlation coefficient for each dimension axis, as shown below:

Table No. (2): Correlation coefficients between each axis after digital transformation and the total score of its items

Correlations		
probability value	Pearson's correlation coefficient	Average of the variable expression independent: Digital transformation
0,000	,813**	After the techniques
0,000	,820**	After driving
0,000	,842**	After the digital strategy

\*\*. The correction rate is 0.01 (digital).

The source Prepared by the researcher at Based on the program outputs SPSS v26

The table above shows the correlation coefficients between each axis of the digital transformation dimension and the total score of its items, where the correlation coefficients ranged between (0.813\_0.842) and are significant at a significance level of 0.01. Thus, the items of the axes forming the independent variable dimension “digital transformation” are considered valid for what they were designed to measure.

#### for Internal consistency results for the axes of the internal communication dimension

and the total score obtained in the dimension:

This dimension consists of (12) phrases that aim to reveal the nature of internal communications prevailing in the institution under study. To ensure the validity and reliability of the phrases, we calculated the Pearson correlation coefficient for each axis of the dimension, which is shown in the following table:

Table No. (3): Correlation coefficients between each axis of the internal

Correlations		
probability value	Pearson's correlation coefficient	Average of the variable expressions continued: Intercom
0,000	,860**	Average phrases After horizontal connection
0,000	,872**	Average phrases After the down call
0,000	,833**	Average phrases After the uplink

\*\*. The correction rate is 0.01 (digital).

The source Prepared by the researcher at Based on the program outputs SPSS v26

communication dimension and the total score of its items

The table above shows the correlation coefficients between each axis of the internal communication dimension and the total score of its items, where the correlation coefficients

ranged between (0.833\_0.872) which is significant at a significance level of 0.01, and accordingly the paragraphs of the axes forming the dimension of the dependent variable “internal communication” are considered valid for what they were designed to measure.

## 2. Display and analyze results:

### 1.2 Display of personal data of the respondents:

In this section, we will define the study sample by specifying the variables: gender, age, and educational level, which is shown in the data in Table No. (04).

**Table No. (04): Distribution of the study sample according to Variables: Gender educational level**

Line age Centennial	repetition	variable	
53.75%	43	female	Sex
46.25%	37	male	
26.5%	26	From 25 to 35 years old	Age
41.25%	33	From 36 to 46 years old	
32.5%	26	47 years and above	
37.5%	30	Bachelor's degree	Educational level
52%	39	Master	
13.75%	11	Postgraduate studies	
100%	80	<b>Total study sample</b>	

**The source** Prepared by the researchers based on the program's outputs. Spss v26

**Gender:** The results of Table No. (04) show that the study sample members of the female gender amounted to 43, i.e. 53.75%, while the number of males represented 37, i.e. 46.25% of the study sample. It is noted that the ratios between the sexes are close, which reflects equal opportunities in employment at the level of the institution Algerian Economic General Assembly.

**Age:** It is clear from the table that most of the employees the institution They are from the youth category, representing the highest percentage, estimated at 41.25% of the total study sample. Category from 36 to 46 years, followed by 32.5% representing the age group of 47 years and above, while we find a

percentage of 26.5% representing For the category The age range is from 25 to 35 years, which indicates the availability of young workers at the institution level. Study location.

**Educational level:** We note from Table No. (04) that most of the respondents hold university degrees, and the highest percentage, estimated at 52% for those with a master's degree, followed by 37.5% for those with a bachelor's degree, while we find that employees with a doctorate degree represent the lowest percentage, estimated at 13.75%, and this indicates reliance on Algerian Public Economic Corporation On scientific competence in the recruitment process.

## 2.2 The reality of digital transformation practice At the Algerian Public Economic Corporation for Telecommunications:

Table No. (05): Level of practice of digital transformation B the institution Algerian Economic General Telecommunications Company

The results of Table No. (05) show: The reality of practicing digital transformation the institution Study location By calculating the arithmetic mean and standard deviation for each statement of the scale as shown in the following table:

standard deviation	arithmetic mean	Digital Transformation Axis
0,554	3.538	After capabilities (technical and human)
0.739	3.69	The organization has a sufficient number of computers to perform the tasks.
0.719	3.70	Employees communicate with each other via the internal electronic network (intranet).
0.856	3.48	Most of the work assigned to you is done electronically.
0.884	3.56	The organization relies on advanced network security programs to preserve data and its confidentiality.
0.807	3.26	nothing In your institution A specialized committee to monitor and follow up on the digital transformation process
0,504	3,415	After driving
0,779	3,48	Senior management considers the move towards digital transformation one of its top priorities.
0.769	3.38	Your boss encourages you to use electronic communication technologies to do your work.
0.778	3.45	The leader has flexibility and the ability to control modern communication technologies.
0, 832	3,38	The employee's career path is tracked electronically, which allows for transparency and fairness in dealing.
0.821	3.40	Senior management focuses on recruiting digital talent.
0.522	3.498	After the digital strategy
0.778	3.45	Employees across all organizational levels were informed of the organization's digital direction.
0.729	3.53	The Foundation is present electronically through its website and its pages on social media sites.
0.825	3.45	The organization integrates digital communication technology into its various operations.
0.795	3.49	The institution provides its employees with training courses to gain greater control over electronic communication technologies.
0.808	3.58	The Foundation has concluded agreements with institutions specialized in the field of modern communication technology.
0.434	3,483	Average axis of digital transformation

source: Prepared by researchers based on the program's outputs Spss v26

Table No. (5) shows the level of digital transformation practice. At the Algerian Public Economic Corporation for Telecommunications Which was estimated by an arithmetic mean 3,483 and standard deviation 0.434, which indicates the lack of dispersion in the answers of the study sample members, and the technology axis came in first place in terms of importance from the

employees' point of view, with a high arithmetic mean of 3.538 and a standard deviation of 0.554, which indicates the consistency of the respondents' answers regarding the level of practicing digital transformation. The institution Study location. The Confirm Answers Researchers Through the capabilities dimension (human and technical) The institution Study location Have

sufficient number of computers This is with an approval rate of 76%, The institution also has an intranet, which helps connect various departments and interests. With each other This is with an approval rate of 65%.%, Most of the study sample's answers also confirm that: The institution cares about investigation Its cyber security through its reliance on information security programs This is at an approval rate of 62.5%, especially since most of the institution's activities and functions are carried out electronically. This was confirmed by the respondents with a percentage of approval represented by 56.3% While we recorded a percentage of 47.5% Some employees confirm that there is no dedicated committee or task force to track and evaluate the organization's digital transformation. Instead, the organization employs a handful of IT specialists who oversee computer maintenance and troubleshooting.

Regarding the digital strategy axis **And** It came in second place in terms of importance with an arithmetic mean of 3.498 and a standard deviation of 0.522, which reflects the adoption of the institution Study location A digital strategy to implement the organization's digital transformation project. To confirm this endeavor, the researchers stated that the percentage 68.8% That the institution She concluded Many An Agreements with emerging institutions in the field of modern communication technology, and Algerian Post and Telecommunications Corporation To benefit from the Applications and the programmatic enables employees to accomplish their tasks easily and with minimal effort, And so on Supply with unless System Which will protect the organization's data and ensure its confidentiality.

Embodying the institution's digital strategy, the latter confirms its presence in the virtual space through: Pages Ha Through various social media sites(Facebook, YouTube,

Instagram..) And so Onvia Its website, All these means contribute to strengthening Quality of internal communications between employees by ensuring that the correct information is provided and shared in a timely manner .appropriate, Similar to Laws and procedures related to the organization of work Like the law The institution's internal regulations and professional code of ethics, The organization also seeks to improve the digital capabilities of its employees through: Organizing in-person training courses And For the tire category, it is done via the intranet for subordinates, The administration also works On the integration of digitization into various activities Hand its functions Leaders are interested in clarifying the vision related to the digital direction of the organization. All employees and their involvement in achieving it, This was confirmed by the study sample members with an approval rate of 62.5%.

**As for the leadership axis** It came in third place in terms of importance with an arithmetic mean of 3.415 and a standard deviation of 0.504. Where is it? Confirm 51.2% of respondents% That leadership the institution It is considered Digital transformation is one of its top priorities. They also emphasize that leaders at the organizational level enjoy With the ability and flexibility to control means digital communication This is at an approval rate of 57.5%, considering that they use these means To perform their duties, and to Communicate with their subordinates in order to Direct them, or provide them with the information they need to accomplish unless Workers, as you confirm majority Study sample Approval rate 61.3% that senior management Pay attention For the competencies that control modern communication technologies and work on a Polarization they And employ them for the benefit of the institution.

In this context, strategic management literature emphasizes that “in order for an organization to be able to implement its digital transformation project, it needs to understand its internal organizational resources and capabilities, as well as understand and keep pace with what is happening outside its organizational boundaries, in order to take advantage of available opportunities, avoid threats, and search for tools that will enhance its operations and improve the quality of its products and capabilities. Perhaps the most important of these is keeping pace with developments in the field of modern communication technology, as well as the need to attract, absorb, and utilize professional competencies to improve the organization’s performance.” (Buck, Clarke, Kevin C, & Desouza, 2023, p. 07) The leadership is also

concerned with the institution Study location By tracking an employee's career path electronically, this enables transparency and fairness in dealing with employees, and motivates employees to use new methods and approaches in performing their duties.

### **3.2Reality of practice A For internal communication At the Algerian Public Economic Corporation for Telecommunications:**

The results of Table No. (06) show: reality Intercom for the institution Study location By calculating the arithmetic mean and standard deviation for each statement of the scale as shown in the following table:

**Table No. (6): Level of internal communication practice from the point of view of Staff Algerian**

standar d deviatio n	arith metic mean	after Intercom
6500	3,484	Horizontal communication axis
0.795	3.46	Electronic communication helps coordinate efforts and achieve integration among employees across various administrative levels.
0.779	3.53	HelpDigital transformation from reductionThe distortion that may affect the informationIt is shared among employees across various departments.
0.693	3.51	Electronic communication reduces the opportunities for personal (face-to-face) contact between you and your colleagues from other departments.
0.760	3.44	Electronic communication has increased the information gap, especially for employees who are not present on social media networks.
6790	3,375	descending axis of communication
0.856	3.34	Your boss uses electronic communication networks to provide you with the information you need to perform your duties.
0.808	3.43	Your boss uses electronic communication networks to provide you with the information you need to perform your duties.
0.755	3.39	Modern communication technology helps overcome the difficulties associated with multiple administrative levels in the organization.
0.956	3.35	Your boss is hiringTechniquesContactDigital (video, text, audio) forAchieving a shared understanding of the organization's goals and mission
6750	3,331	Ascending Communication Axis
0.825	3.45	Electronic communication enables you to provide your boss with information in a timely manner.
0.879	3.25	Request further clarification if you do not understand the content of the emails sent by your boss.
0.871	3.23	You use the phone to communicate concerns to your boss.
0.722	3.40	Always use multiple communication methods at the same time to ensure your messages get through.
0.571	3,397	Average internal communication axis

Source: Prepared by researchers based on the program's outputs. Spss v26

### **Public Economic Corporation**

The table above shows the level of internal communication practice from the employees' point of view. the institution Algerian Economic General Assembly, Where it is possible the middle the My account for 3,397 and no Deviation the normative for 0.571, which indicates the lack of dispersion in the answers of the study sample members, and the horizontal axis of communication came in Ranked first in importance with an arithmetic mean of 3.484 and a standard deviation of 6500, confirmed During it Researchers Digital transformation affects the improvement of the quality of internal communication, and this is highlighted by the role it plays. Communication methods Digital Various (email, company website, intranet...) in reducing from Distortion that may affect information during Share it and Share it among employees across differentL evels and departments of the institution, which was confirmed by the respondents' answers with an approval rate of 51.2% We also recorded an approval rate of 58.3% Researchers confirm that digital communication methods have led to a reduction in...Opportunities for personal (face-to-face) contact Among employees, as they rely more on the intranet to exchange information among themselves without the need to move from one department to another, which has contributed to strengthening horizontal communication in the organization, and what confirms this is the study sample's confirmation of an approval rate of 53.8% However, digital communication media has helped to coordination the efforts Organization members And achieve integration Functional and cooperation between individuals Across various administrative levels, which is consistent with

the results of the study conducted by Lucia Wuersch et al) (Through which he stressed that the digital strategy contributes significantly to supporting trust and cooperation among the organization's members.(Lucia, Alain, Jane F, & Marc K, 2024) While we recorded an increase information gap Between employees who use digital communication technologies and those who do not use them except when necessary, which is confirmed by the study sample at a rate of 45%.

As for the downward connection, it came in second place in terms of importance, with an arithmetic average of 3,375 and standard deviation 6790, During which she confirmed Study sample B That downward digital communication enabled subordinates To obtain accurate information to perform their tasks This is at an approval rate of 46.3%, Which allows for Overcoming the difficulties of multi-level Administrative At the institution The study area is confirmed by the study sample with an approval rate of 51.2%, as They confirmed that 42.5% On that Presidents They employ digital communication technologies to Strengthening Common understanding of Goals And a message The institution and verification This is done through videos displayed on electronic boards. Within the institution, Which It reminds employees of the organization's logo and its most important offers and services.

As for the upward communication, it came in third and last place in terms of importance, with an arithmetic mean of 3,331 and a standard deviation of 0.6750, where it was confirmed Researchers Digital communication means enable them to deliver timely information to their superiors. This represents an approval rate of 51.2%, using email and phone. Intranet, etc., as confirmed by the percentage 52.5% From the study sample, digital communication media enables them to obtain feedback.((Feedback At the time,

through Enabling them to request Clarifications Or submit inquiries regarding emails they received by sending other messages to their supervisors.

### 3\_ Testing the study hypotheses:

To prove the validity of the hypotheses, Pearson's correlation coefficient was used to determine the extent of the relationship between the study variables, and This account coefficient of determination Simple linear regression to illustrate the effect size Among the study variables, Which we will explain below:

### 1.3 General hypothesis of the study:

H1: There is a statistically significant effect at the significance level ( $0.05 \geq \alpha$ ) For digital transformation to improve the level of internal communication the institution Algerian Economic General Telecommunications Company

#### Table No. (07) Correlation analysis, one-way analysis of variance, and simple linear regression

#### Between digital transformation and internal communication

Modele		R	R-deux	Coefficients are non-standardised		Coefficients standardisés		t	Sig.
				B	Erreur standard	Bêta			
1	(Constant)	,574a	,329	211	375			,562	575
	Middle Digital Transformation Axis			915	,107	696		8,554	,000
a. Variable dependent: Average internal axis									

**The source** Prepared by the researcher at Based on the program outputs SPSS v26

From the results of the table shown above, it is clear that there is a positive correlation between the two variables, as the correlation coefficient reached  $R=0.574$ , and the overall coefficient of determination for the study was estimated at  $R^2=0.329$ , meaning that digital transformation contributes to explaining internal communication by 57%, and the remaining 43% is explained by other variables that were not addressed in this study.

The results of the univariate analysis show that the significance level is significant at the degree of freedom shown in the table, as the significance level is  $Sig$  is less than the

significance level of 0.05, which confirms the overall significance of the model.

As for the simple linear regression analysis between digital transformation and internal communication, the results show that: that The coefficients of the equation are positive., The regression coefficient also reached  $B$  for digital transformation is 0.915, so every time the digital transformation changes by one unit, this leads to a change in the level of internal communication by 0.915.

On this basis, we reject the hypothesis. $H0$  We accept hypothesis  $H1$ , which states that there is a statistically significant positive effect between digital transformation and internal communication at a significance level of  $0.05 \geq \alpha$ , from the employees' point of view.

The institution Algerian Economic General Assembly, and The main hypothesis can be formulated as:

**Internal connection = 0.211 +0.915 digital transformation.**

### 2.3 Testing and discussing the study's sub-hypotheses:

#### First sub-hypothesis:

H1: There is a statistically significant effect at the significance level ( $0.05 \geq \alpha$ ) For technical

capabilities to improve internal communication the institution Algerian Economic General Telecommunications Company

**Table No. (08): Correlation analysis, one-way analysis of variance, and simple linear regression between the following techniquesWith internal communication hub**

Modele		R	R-deux	Coefficients are non-standardised		Coefficients standardised	t	Sig.
				B	Erreur standard			
1	(Constant)	,525a	,276	1,307	,342		3,821	,000
	After Technologies			,591	,096	,574	6,185	,000
a. Variable dependent: Average internal axis								

**The source** Prepared by the researcher at Based on the program outputs SPSS v26 We note from the data in Table No. (8) that there is a positive correlation between the “technology dimension” and the “internal communication axis”, as the correlation coefficient reached  $R=0.525$ , and it is also shown that the overall coefficient of determination for the study was set at  $R^2=0.276$ , which means that the “technological dimension” explains 53% of the dependent variable “internal communication” and the rest is due to other factors that were not included in this study.

The results of the one-way analysis of variance indicate that the level of significance is significant at the degree of freedom shown in the table, as the value of The significance level Sig is less than the significance level 0.05, so we confirm the overall significance of the model.

As for the simple linear regression analysis between the “technology dimension” and the

“internal communication” axis, the results show that the equation coefficients are positive, as the regression coefficient reached B for the technology dimension is 0.591, and therefore, every time the technology axis changes by one unit, it leads to a change in the level of internal communication by a value of 0.591.

On this basis, we reject the hypothesis  $H_0$  We accept hypothesis  $H_1$ , which states that there is a statistically significant positive effect between the technology axis and the internal communication dimension at a significance level of  $0.05 \geq \alpha$ . The main hypothesis model can be formulated in the following form:

**Intercom =0.591+1.307 Average Digital Technologies Axis**

#### Sub-hypothesis Second:

H1: There is a statistically significant effect at the significance level ( $0.05 \geq \alpha$ ) The leadership axis is focused on improving internal communication. The institution Algerian Economic General

## Grandfather And number (09)Correlation analysis, one-way analysis of variance, and simple linear regression

## Between leadership and internal communication

Modèle		R	R-deux	Coefficients are non-standardised		Coefficients standardisés	t	Sig.
				B	Erreur standard			
1	(Constant)	,621a	,386	1,364	,377		3,620	,001
	afterLeadership			,595	109	525	5,450	,000
a. Variable dependent: Average internal axis								

**The source** Prepared by the researchers based on the program's outputs. SPSS v26

The results of Table No. (9) show that there is a positive correlation between the "leadership axis" and the "internal communication dimension", as the correlation coefficient reached  $R=0.136$ , and it is also shown that the overall coefficient of determination for the study reached a value of  $R^2=0.19$ , which means that the "leadership axis" explains 19% of the dependent variable "internal communication" and the rest is due to other factors that were not included in this study.

As for the results of the one-way analysis of variance, the significance level is significant at the degree of freedom shown in the table above, as the value of Significance level  $Sig$  Less than a significance level of 0.05, which confirms the overall significance of the model. The results of the simple linear regression analysis between the "Technology Axis" and the "Internal Communication" dimension It becomes clear Through it, the equation coefficients are positive. And The regression

coefficient reached B for technology axis 0.232, Any time Changing the "Technology Axis" by one unit resulted in a change in the level of internal communication of 0.232.

On this basis, we reject the hypothesis  $H_0$  We accept hypothesis  $H_1$ , which states that there is a statistically significant positive effect between the leadership axis and the internal communication dimension at a significance level of 0.05  $\alpha=$ . The main hypothesis model can be formulated in the following form:

**Intercom =0.591+1.307 Average Digital Technologies Axis.**

### Sub-hypothesis 3:

**H1:** There is a statistically significant effect at the significance level ( $0.05 \geq \alpha$ ) For the digital strategy to improve internal communication the institution Algerian Economic General

## Table No. (09) Correlation analysis, one-way analysis of variance, and simple linear regression

## Between digital strategy and internal communication

Modèle		R	R-deux	Coefficients are non-standardised		Coefficients standardisés	T	Sig.
				B	Erreur standard			
1	(Constant)	,621a	,386	1,021	,343		2,972	,004
	afterDigital Strategy			679	,097	621	6,996	,000
a. Variable dependent: Average internal axis								

**The source** Prepared by the researchers based on the program's outputs. SPSS v 26

The results of Table No. (09) show that there is a positive correlation between the “digital strategy axis” and the “internal communication dimension”, as the correlation coefficient reached  $R=0.621$ , and it is also shown that the overall coefficient of determination for the study reached a value of  $R^2=0.386$ . This means that the “leadership axis” explains 62% of the dependent variable “internal communication” and the rest is due to other factors that were not included in this study.

As for the results of the one-way analysis of variance, the significance level is significant at the degree of freedom shown in the table above, as the value of The significance level  $Sig$  is less than the significance level 0.05, which confirms the overall significant significance of the model.

As for the results of the simple linear regression analysis between the “digital strategy axis” and the “internal communication” dimension, it is clear from them that the equation coefficients are positive, as the regression coefficient reached  $B$  for the digital strategy axis is 0.679, so every time the “technology axis” changes by one unit, this leads to a change in the level of internal communication by 0.679.

On this basis, we reject the hypothesis  $H_0$  We accept hypothesis  $H_1$ , which states that there is a statistically significant positive effect between the digital strategy axis and the internal communication dimension at a significance level of  $0.05\alpha=$ . The main

hypothesis model can be formulated in the following form:

**Intercom =0.591+1.307 Average Digital Strategy Axis.**

**a summary:**

Through the study we conducted, we have confirmed that there is an impact of digital transformation on improving internal communication in the Algerian Telecommunications Corporation, as it contributes to...Digital transformation Pivotal to improving quality the Communication between employees and achieving harmony and functional integration among them across various organizational levels, which will have a positive impact. On the institution's performance As a whole And its response to change  $T$  that may be imposed by the external environment and exploit the available opportunities more effectively. The most important results we have reached in this study can be identified as follows:

\_The level of practice «Digital transformation» At the Public Economic Establishment of Telecommunications in Algeria high, The availability of capabilities (human and technical) came in first place in terms of importance. Followed by the axis Digital strategy then axis Leadership In last place, according to the respondents' answers;

\_ But Regarding Practice level "Intercom «He is also rose Relatively compared to the level of practice of digital transformation, the focus of communication came Horizontal comes first

followed by the downward axis of communication., In the third and final place we find the ascending connection.;

The institution under study is interested in providing and exploiting various communication technologies in order to enable employees to perform their duties by providing both: computers Intranet, company website, social media sites, electronic bulletin boards, electronic platforms, telephone..).

\_Take over command The Algerian Public Economic Establishment of Telecommunications attaches great importance to improving the quality of its internal communications through its interest in...By explaining and clarifying the vision and approach you adopt to embody the digital transformation of the organization, And trying to involve employees in achieving this. Incentivize they For approval Digital communication technologies and means to accomplish their tasks. The institution also works to provide Training courses In the field of digital communication, it is delivered in person for middle management, while it is delivered online for subordinates. However, this type of training may limit subordinates' comprehension and prevent them from achieving the desired goals.

\_Contribute Digital transformation In a Moving from traditional transactions to digital transactions based on the use of Technology, Which led to Save time and effort, ensure information is available and shared with all

employees, and enhance communication through Open communication channels in all directions (upward, downward, horizontal).

\_ Digital transformation has contributed to reducing Errors resulting from poor circulation of information Especially regarding Spreading rumors, and which would Negatively impacting the effectiveness of internal communication and the performance of the organization as a whole;

\_Enable employees to obtain various Related information for the job (like Code of Professional Ethics and the Institution's Internal Regulations, reports...),By providing it Electronically Through its official website or through the internal communications network.

\_ Among the most important findings is that the digital transformation has led to a widening information gap between employees who use new media (social media) to interact with each other and those who use them only when necessary.

The institution under study has specialists working on computer maintenance, but there is no dedicated team or committee to monitor, evaluate, and assess the institution's digital transformation process to achieve the objectives set forth in this context.

\_Confirm the existence of Statistically significant effect at the significance level ( $0.05 \geq \alpha$ ) for capabilities (Humanity and Technology) To improve internal communication the institution Algerian

Economic General Telecommunications Company;

Proof of existence Statistically significant effect at the significance level ( $0.05 \geq \alpha$ ) To drive improvement of internal communication the institution Algerian Economic General Telecommunications Company;

Emphasis on A statistically significant effect was found at the significance level ( $0.05 \geq \alpha$ ) Digital strategy to improve internal communication the institution Algerian Economic General Telecommunications Company;

The results we have reached in this study can be considered a starting point for forming further scientific analysis in the field of embodying and activating the digital transformation process of Algerian economic institutions and highlighting its impact on improving the quality of their internal communication process, while emphasizing the need to benefit from the outcomes of this study, especially with regard to controlling leadership behavior more and paying attention to training employees to control modern communication technologies and developing the digital strategy of the institution, especially through Establish a committee to follow up Evaluating the success of the organization's digital transformation.

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List of appendices:

Table No. (10): Trends of the study sample towards the axis of the independent variable "digital transformation"

Strongly disagree	Disagree	neutral	OK	Strongly agree	Repetitions/Ratios	Independent variable axis phrases: "digital transformation"
0	9	11	56	4	repetition	The institution has a sufficient number of computers. To perform tasks
00%	11.3%	13.8%	76%	5%	ratio	
01	4	18	52	5	repetition	Employees communicate with each other via the internal electronic network (intranet).
1.3%	5%	22.5%	65%	6.3%	ratio	
0	15	16	45	4	repetition	Having difficulty inComplete the tasks assigned to youElectronically due to your weak technical skills
00%	18.8%	20%	56.3%	5%	ratio	
1	13	11	50	5	repetition	The organization relies on advanced network security programs to preserve data and its confidentiality.
1.3%	16.3%	13.8%	62.5%	6.3%	ratio	
1	15	26	38	0	repetition	The institution has specialists in information systems.
1.3%	18.8%	32.5%	47.5%	00	ratio	
1	13	23	41	2	repetition	It is consideredSenior ManagementMoving towards digital transformation is one of the most importantHer priorities
1.3	16.3%	28.7%	51.2%	2.5%	ratio	
1	11	25	43	0	repetition	Your boss encourages you to use electronic communication technologies to do your work.
1.3%	13.8%	31.3%	53.8%	00	ratio	
1	10	22	46	1	repetition	The leader has flexibility and the ability to control modern communication technologies.
1.3%	12.5%	27.5%	57.5	1.3%	ratio	
0	14	14	52	0	repetition	The employee's career path is tracked electronically, which allows for transparency and fairness in dealing.
00%	17.5%	17.5%	65%	00	ratio	
0	17	14	59	0	repetition	Senior management focuses on recruiting digital talent.
00%	21.3%	17.5%	61.3%	00	ratio	
0	14	16	50	0	repetition	Employees across all organizational levels were informed of the organization's digital direction.
00%	17.5%	20%	62.5%	00	ratio	
0	11	16	53	0	repetition	The Foundation is present electronically through its website and its pages on social media sites.
00%	13.8%	20%	66.3%	00	ratio	
1	14	13	52	0	repetition	The organization integrates digital communication technology into its various operations.
1.3%	17.5%	16.3%	65%	00	ratio	
1	12	14	53	0	repetition	The institution guaranteesFor its employeesTraining courses(In-person or online)To have more control over communication technologiesElectronic
1.3%	15%	17.5%	66.3%	00	ratio	
1	11	11	55	2	repetition	The Foundation has concluded agreements with institutions specialized in the field of modern
1.3%	13.8%	13.8%	68.8%	2.5%	ratio	

Table No. (11): Trends of the study sample towards the axis of the dependent variable "internal communication"

Strongly disagree	Disagree	neutral	OK	Strongly agree	Repetitions/Ratios	Dependent variable axis phrases: "internal communication"
0	12	22	43	3	repetition	Electronic communication helps coordinate efforts and achieve integration among employees across various administrative levels.
00%	15%	27.5%	53.8%	3.8%	ratio	
0	9	25	41	5	repetition	HelpDigital transformation from reductionThe distortion that may affect the information while sharing it among employees
00%	11.3%	31.3%	51.2%	6.3%	ratio	
0	8	24	47	1	repetition	Electronic communication reduces the opportunities for personal (face-to-face) contact between you and your colleagues from other departments.
00%	10%	30%	58.3%	1.3%	ratio	
0	9	31	36	4	repetition	Electronic communication has increased the information gap, especially for employees who are not present on social media networks.
00%	11.3%	38.8%	45%	5%	ratio	
1	14	25	37	3	repetition	Your boss uses electronic communication networks to provide you with the information you need to perform your duties.
1.3%	17.5%	31.3%	46.3%	3.8%	ratio	
0	12	26	38	4	repetition	Your boss uses electronic communication networks to provide you with the information you need to perform your duties.
00%	15%	32.5%	47.5%	5%	ratio	
0	12	26	41	1	repetition	Modern communication technology helps overcome the difficulties associated with multiple administrative levels in the organization.
00%	15%	32.5%	51.2%	1.3%	ratio	
3	12	25	34	6	repetition	Your boss is hiringVarious techniquesContactDigital (video, text, audio) for Achieving a shared understanding of the organization's goals and mission
3.8%	15%	31.3%	42.5%	7.5%	ratio	
0	13	22	41	4	repetition	Electronic communication enables you to provide your boss with information in a timely manner.
00%	16.3%	27.5%	51.2%	5%	ratio	