

Mid ocean University

College of management

Specialization of project management



**The impact of information technology on the success of
projects, an applied study on the Tawakkalna program during**

Covid - 19

Preparation

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Dedication..

As I put the final touches to this study, I cannot help but extend my thanks to everyone who had a contribution to it, even if it was a simple one, and I especially thank the doctor supervising this project, who had the credit, after God Almighty, in illuminating the path of research for me.

Through his directives and guidance, God placed them in the balance of his deeds

.....

Thanks and appreciation..

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Abstract

1.1 Introduction

Today's environment is witnessing dynamic, changing competition through the tremendous and rapid development in technology and communications, which has turned the world into a small village whose markets are opening up to each other, and where the intensity of competition is increasing, which has made companies seek to develop their operations and systems to improve outstanding performance, improve and enhance the sustainability of their competitive positions and achieve competitive advantage. This confirms the necessity of keeping pace with rapid and massive technological changes through the application of appropriate systems and technologies. (Khabarat, 2021).

The wide spread of technology and information technology has enabled the introduction of innovative tools and means in the field of project management, starting, planning, implementing, monitoring, closing, and confronting the various structural and functional changes that the environment faces. Among these tools is information technology, which is one of the most important main areas of technology and information technology. (Badawi, 2019).

Information technology is a tool for coordinating and supporting the administrative processes of projects and making decisions, improving and activating the movement of internal and external communications for the project, obtaining speed of response when performing tasks, and providing many capabilities such as: the information network, the browsing program, the internal network, data extraction, and data warehouses. which facilitates and accelerates the

management of project operations and makes them more flexible and responsive to surrounding variables and achieving the requirements of different stakeholders. (Saqr, 2020).

Hence, this study came to investigate the impact of the use of information technology and information technology on the success of projects, by applying it to the Tawakkalna application during the COVID-19 period and its spread around the world in planning, organizing, implementing and controlling the various processes and activities of project management, and in ways that give it flexibility towards variables and influences that may stand in its way. To increase its ability to seize available opportunities and confront threats in order to overcome them or reduce their impact, and to achieve high performance rates in the face of competition, in order to achieve its goals of survival, growth and profitability. (Hawamdeh, 2022).

Information technology has a significant impact on the success of projects in various fields, including health applications. In light of the COVID-19 pandemic, the use of information technology has become more important than ever. One of the successful applications in this regard is the “Tawakkalna” program, which was developed in Saudi Arabia to deal with the challenges of the Covid-19 pandemic.

The “Tawakkalna” application is a technical application that aims to facilitate dealing with the Covid-19 pandemic and provide health services in a safe and effective manner. The program provides a wide range of features, including tracking cases infected with the virus, providing important information about the epidemiological situation, identifying risk areas, and communicating with competent health authorities. (Al-Hiyari, 2022).

Information technology contributed to the success of the “Tawakkalna” application in several ways. First, using the application allows tracking cases infected with the virus and providing epidemiological data quickly and accurately, which helps in making basic health decisions. Second, it provides seamless communication between users and relevant health authorities, facilitating the transfer of vital information and coordination of efforts. Third, the software provides necessary services to users such as appointment booking and medical inquiries, which enhances patients' experience and improves healthcare. IT and its health applications arguably play a crucial role in the success of projects during the COVID-19 pandemic. The “Tawakkalna” application is a clear example of how technology can be used to enhance healthcare and facilitate dealing with the challenges of the pandemic. (Abu Taha, 2021).

1.2 Research problem

The massive and rapid technological revolution and its complexity, openness to global markets, breaking down barriers, changing laws, and easy flow of capital, require projects operating in the information and communications technology sector to develop themselves in a way that suits the new environment, which calls on them to pay attention to developments in the health sector, to strengthen their position. Competitiveness, developing intellectual and technical resources and capabilities, reducing operational costs, shortening cycle time, increasing the speed of developing new products and new markets, improving product quality in order to meet customers' needs and gain their loyalty, thus expanding market share, increasing profits and achieving success.

Hence, the purpose of this study is to study the impact of the use of information technology on the success of projects in the health sector by applying it to the Tawakkalna application for smart phones during the COVID-19 period.

1.3 Research questions

- To what extent is information technology used (elements and characteristics) in the health sector?
- How successful are projects in the health sector?
- Is there an impact of information technology in its two dimensions (elements and characteristics) of information technology on the success of projects in its dimensions of survival, growth, and profitability in the health sector?

1.4 Research aims

- Study the impact of using the Tawakkalna program, as an information technology tool, on the success of projects during the Covid-19 pandemic.
- Evaluate the effectiveness of the use of information technology, including the Tawakkalna programme, in achieving project objectives during the Covid-19 pandemic.
- Analyze the challenges and opportunities facing the use of information technology, especially the Tawakkalna programme, within projects during the Covid-19 pandemic.
- Direct recommendations and improvements based on previous results and analyses.

1.5 Research importance

This study derives its importance from several points, including:

- We are now living in the age of knowledge, and the health sector is considered one of the active sectors in project management, and contributes increasingly and significantly to their effectiveness. It has become one of the factors that determine the failure or success of projects.
- The reliance of government organizations in general and project management in particular on computers and computer-based information systems makes it necessary to carefully analyze their impact on performance because this technological pattern differs from traditional patterns of performance.
- Studying the impact of the use of information technology on the success of projects in its dimensions in the health sector.
- Studying the impact of the use of information technology on the survival of projects in the health sector.
- Studying the impact of the use of information technology on the growth of projects in the health sector.
- Studying the impact of the use of information technology on the profitability of projects in the health sector.

1.6 Research hypotheses

In light of the problem of the study and its elements that seek to achieve it, the researcher formulated the following hypotheses:

1.7 Main assumptions:

- There is no statistically significant effect at the level of ($\alpha=0.05$) for information technology in its dimensions, elements and characteristics of information technology, on the success of projects in its dimensions of survival, growth, and profitability in the health sector.
- There is no statistically significant effect at the level (0.05) of information technology elements and their dimensions on the success of projects in their dimensions in the health sector.

Sub-hypotheses:

- There is no statistically significant effect at the level (0.05) of the information technology elements and their dimensions on staying in the health sector.
- There is no statistically significant effect at the level (0.05) of the information technology elements and their dimensions on growth in the health sector.
- There is no statistically significant effect at the level (0.05) of information technology elements and their dimensions on profitability in the health sector.
- There is no statistically significant effect at the level (0.05) of information technology characteristics on the success of projects in the health sector.
- There is no statistically significant effect at the level (0.05) of information technology characteristics on staying in the health sector.

1.8 Methodology

Within the framework of the research problem, the pursuit of its objectives, and the presentation of previous studies, this research was divided into three main elements:

Data sources and methods of obtaining them. Data sources are divided into the following:

Secondary sources of data: mainly represented in Arab and foreign references, as well as periodicals and scientific theses that dealt with the subject of information systems and project management, which the researcher relied on in building the theoretical and analytical framework for the study.

Primary sources of data: These are the primary data related to the research topic. The researcher relied on the field study to provide the required data on the relationship of information technology to the success of projects, through a questionnaire list directed to users of the Tawakkalna application, in order to provide this data in detail to benefit from it in analyzing relationships and determining results. Testing hypotheses statistically and developing appropriate recommendations, thus achieving the main objectives of the study.

The limits of the study

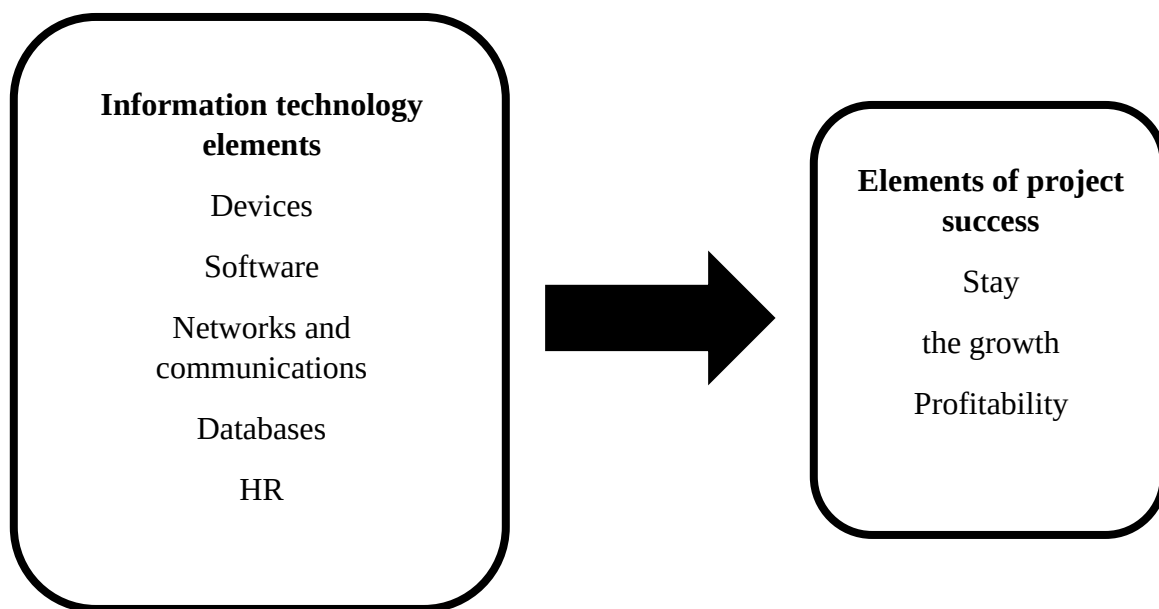
- Spatial limitations: The study was limited to users of the Tawakkalna application in the Kingdom of Saudi Arabia.
- Time limits: The researcher prepared this research during the time period of 2024-2025.
- Limitations related to the subject of the study: The study was limited to examining the impact of information technology on the success of project management by applying it to the Tawakkalna application for smart phones in the Kingdom of Saudi Arabia.

Analysis methods

The researcher relied on a variety of statistical methods to analyze the data obtained from the respondents. The most important of these methods are percentages, computer averages, standard deviation to measure the dispersion of values around their arithmetic mean, the Kruskal-Wallis test, and simple and gradual regression. The survey data was transcribed and analyzed using a computer. Based on spss program.

Research model

Figure (1-1) shows a model for the study, to explain the effect of the independent variables, represented by information technology, on the dependent variable, which is the success of projects:



The model was prepared by the researcher

Difficulties faced by the researcher:

The most important determinants of this study were the set of difficulties that the researcher faced during the conduct of this study, which were initially the intersection of the concepts of technology, information technology, and information technology, and the lack of cooperation of the respondents in providing the necessary information to enrich the subject of the study and in answering the questions directed to them for fear of exposing them to responsibility. They were also slow in responding to the questions included in the data collection tool.

1.9 Previous studies

- **Previous studies on projects**

- 1. Study by Abdul Rasoul (2019), entitled Building a Project Management Website. Of the World Water Organization.**

The information and communication revolution has governed decisively the change management and it is now available to use the available information. To achieve the goals of the institution. Dependence on information and communications technology has become one of the most important pillars from which modern management.

In this research, a projects management site for the World Water Organization has been built, where the organization faces a problem in collecting donations and determining the priority of starting the implementation of the project. The research aims to facilitate the fundraising process and facilitate the conduct of the necessary studies to determine the

priority of project implementation, by saving time and effort by utilizing the techniques. Languages and techniques were used (Laravel, JavaScript, Ajax, Json, JQuery). UML was used in analysis and design schemes. Reducing the time and effort involved in the project request and fundraising process through bank transfer was found.

2. Hayarat Study (2021), The Impact of Project Management Practices on Public Safety: An Applied Study on Construction Projects in the City of Amman.

This study came to measure the impact of applying project management practices (project planning, Project communication, project control and control) to improving public safety (maintaining worker safety, improving work environment and reducing safety costs) in projects. The study population consisted of contracting companies in the city of Amman registered with the Jordanian Construction Contractors Syndicate, and due to the conditions of the COVID-19 pandemic convenience sample (236) of project managers, company owners and engineers. Working in these companies was selected. A questionnaire covering all variables was developed to collect data from the study sample and analyze it using the SPSS program. After testing the hypotheses, the study found that there is no effect of project planning, project monitoring and control compared to communication in maintaining the safety of workers. The impact of project management practices on improving the work environment and reducing safety costs. Several recommendations were proposed to increase the benefits of project management practices on public safety in construction projects in the city of Amman, such as ensuring that engineering plans are audited before starting the project to ensure the element of

public safety, and providing workers with appropriate training to identify risks to protect them from accidents and injuries.

3. Badawi's study (2019), Obstacles to financing small projects in the Gaza Strip from the viewpoints of project financing institutions and those in charge of the projects.

The aim of the study is to find out why microfinance institutions are reluctant to provide the required financing for small projects and to highlight the difficulties faced by small-scale entrepreneurs in obtaining the appropriate financing for their projects. This exploratory study targets microfinance institutions and small-scale entrepreneurs. This study adopts survey by way of questionnaire methodology where 44 questionnaires out of 50 targeted microfinance institutions were completed (%88), however, 33 out of 40 questionnaires targeted small-scale entrepreneurs were successfully completed (%82.5). From the results, it was found that microfinance institutions believe that providing securities is indispensable in order to provide finance for entrepreneurs, and not providing such securities would make it hard to facilitate any projects. Also, not paying funding installments debts would adversely affect other microfinances. Besides that, the lack of financial funding limits the number of microfinances.

From the point of view of micro entrepreneurs, microfinance institutions do not provide the full funding required for the project and the amount of financing provided by the financing institutions is not suitable for the establishment of the project in a good manner and produces at a high cost and approval of the amount of funding needs a long period of time. Before the management of the financing institution, which reduces the opportunity to establish the project and lack of sufficient experience to deal with the

funding institutions to obtain the appropriate funding for the project .The study recommended working on holding educational workshops for project owners to deal with banks in the way they work and procedures to facilitate the task of obtaining finance and credit facilities. To work hard to establish a unified institution to ensure project financing with the support of donors to break down the payment of projects to finance other projects and recommend financing institutions to facilitate procedures for guarantees and work on financing projects. With less guarantee commensurate with the capital of the project and recommend funding institutions to provide full funding for the establishment of the project as planned and to expedite the disbursement of funding to secure the establishment of the project in a timely. Manner and recommend to the financial institutions not to increase the burden when the default payment from the sponsors and impose other obligations.

4. Saqr (2020) study, Financing housing projects in Algeria: a case study of the National Fund Equivalent Social Services FNPOS.

The housing sector in Algeria has undergone many and many transformations due to the economy and social conditions that the country has known, and among the most important circumstances we find in the financing housing projects in Algeria, which still suffers from many shortcomings, due to the lack of flexibility and specialization of financial institutions and also the limitation of financing, management and distribution in most cases to the state.

And housing projects continued to suffer from problems of providing financing due to their huge and long terms, and therefore it was necessary to search for new sources to

confront the problem of housing finance, so that the traditional sources of financing are considered insufficient to cover the huge volume of housing demands, so introducing new financing Tools is considered a necessity to modernize the real state sector.

5. Hawamdeh's study (2022), The impact of international project management standards on the quality of construction projects, a field study on contracting companies in Jordan.

This study aimed to identify the impact of international standards for project management on the quality of construction projects (a field study on contracting companies in Jordan). To achieve the objectives of the study, the descriptive survey method was used, by developing a questionnaire whose validity and reliability were confirmed. It was applied to random sample of engineers working in contracting companies in Jordan, which numbered (309). In order to answer the study questions and test its hypotheses, the SPSS program was used to analyze the study data. Extracting the arithmetic means and standard deviations, and applying the multiple regression equation. The study reached many results. The most important of which is that the degree of application of international standards for project management was medium, and that the level of quality of construction projects was medium. Existence of the impact of the application of international standards for project management on the level of quality of construction projects. This study also made a number. Of recommendations, the most important of them are: Improving the degree of application. Of international standards for project management in contracting companies in Jordan, and improving total quality management and quality control and assurance procedures in construction projects.

6. Al-Hiyari (2022) study: The impact of the personal characteristics of project managers on the success of construction projects, an applied study on construction projects in the city of Amman.

This study aimed to demonstrate the impact of personal characteristics of project managers on the success of construction projects in the in Amman city in terms of leadership, communication, work ethics, and productive efficiency. The study-targeted population was derived out of a group of construction projects in Amman, which consisted of (project managers, executive managers, supervising engineers), where the ongoing construction projects reached to (3717) according to the Jordanian Engineers Association data. The sample was selected randomly, which amounted to (580) individuals taking into consideration Stephen Thompson's equation to calculate the sample size. Questionnaires were distributed to the study sample as a survey, where (560) were retrieved, out of which (12) questionnaires were invalid for analysis and were excluded based on that, while (548) responses were valid for analysis used accordingly for this study. The study's primary data was collected through the questionnaires that developed with help of specialists and experts in the field. The study relied on quantitative approach & descriptive analytical method as well as Statistical Package for Social Sciences (SPSS) program that used to analyze the data. The study reached out several results, the most important of which was that there is an impact of the personal characteristics of project managers on the success of construction projects in Amman, where the value of

(R2) was (60.9%), construction project managers are characterized by directing and influencing the workers in the project, and supporting them morally in a manner that doesn't conflict with the project objectives. Based on the results, the study recommended the need to intensify the work of supporting the project team financially in a way that doesn't contradict the project's objectives, and to involve them in the decision- making process in order for them to stay involved and loyal to the project.

7. Amr's study (2022), Construction Project Management Evaluation: An Applied Study on Construction Projects in Balqa Governorate.

This study was focused and aimed to evaluating the management of construction projects through its dimensions (planning, administrative organization, monitoring, follow-up) in the projects of the ministries of Local Administration and works in Al-Balqa governorate.

The study community consisted of construction projects affiliated to the Ministries of Municipalities and Works in Al-Balqa Governorate, where the application was applied to the study community by comprehensive survey, and it included a group of (project manager, assistant project manager, department head, supervisor), and the researcher relied on the quantitative approach in collecting primary data By making a questionnaire, developing it and distributing it to these projects, then analyzing it and testing its hypotheses using appropriate statistical methods and using the Statistical Package for Social Sciences (SPSS); As (167) questionnaires were distributed, (156) questionnaires were retrieved, and (5) questionnaires were excluded because they were not suitable for analysis, so that the final sample became (151) questionnaires. The analytical descriptive

method was used by reviewing the previous literature related to the topic of the research in order to develop the study model.

The study reached a number of results, most notably: The level of evaluation of construction project management represented by its dimensions (planning, administrative organization, monitoring, follow-up) in the construction projects affiliated to the Ministries of Municipalities and Works in Al-Balqa Governorate. Between (3.79 4.10). Based on the results, the study recommended the need to work on determining the needs of the construction project before completing the planning process, through the assistance of experts and consultants in similar projects.

- **Previous studies on information technology**

1. **Jack's study (2019), The role of information technology in strengthening strategic planning management with application to Khartoum State, July 2019.**

This study deals with the role of information technology on the promotion of strategic management by applying it on Khartoum state. The problem of the study was the lack of use of IT in strategic planning department of Khartoum state. Importance of the study it can create a modern and renewable operating environment and changes the level of performance and thinking to achieve a high degree of efficiency in long-term strategy, also to benefit from the information technology and then raise the efficiency of performance in the analysis, evaluation and evaluation of strategic plans, search tools java script. The importance of the study stems from the increasing importance of information technology in strategic planning management field to keep peace in developing countries. The absence of previous study in Sudan and methods of using information technology in

raising the efficiency of the performance of the strategy. The main objective of the study is to determine the extent to which information technology is used in strategic planning. The study followed the analytical descriptive approach and the method of statistical analysis. Also, the study made many recommendations, including that The Ministry of Strategic Planning must increase the use of information systems to help manage strategic plans, especially electronic services and to pay attention to the technical strategies within the state based on technology Modern information through technical systems.

2. Study by Ahmadana (2022), using the Gaussian technique. The cloud in providing direct information services to libraries, an applied study at the central library of Al-Nilein University.

The study dealt with cloud computing services in libraries to keep pace with the rapid development and rise to the level of developed. Countries in the field of providing direct information services to the beneficiaries of the library.

The research problem is the weak utilization of information technology and computer systems in the provision of library services, and not taking advantage of cloud computing technology to provide these services. The research aims at the possibility of benefiting from cloud computing services in providing the services of current briefing and selective transmission of information through the work of a computerized system. The computrazed system provided, using PHP and java script for website design and SQL for database design.

An entity model was used to analyze the system. Algorithms were used to describe system operations. The study reached a number of results, the most important of which is the

provision of a computerized system in the library that includes these services, and then uploading it to the GIT HUP cloud. The study recommends a number of recommendations, the most important of which is subscribing to the private cloud to be able to raise the library's database and link it to the site of its services.

3. Al-Rawashdeh Study (2021), The Impact of Information Technology Governance on the Quality of External Auditing: The Modifying Role of Enterprise Resource Planning Systems: A Field Study: Jordanian Commercial Banks.

This study aims to measure the impact of information technology according to the COBIT 5 framework on the quality of external auditing in light of the application of enterprise resource planning systems. In order to achieve the intended goals a questionnaire was developed covering all the study variables. The questionnaire was distributed to the target population, which consists all audit firms that assumed the task of auditing for the Jordanian commercial banks; moreover, the commercial banks in Jordan are (13) banks, according to the companies guide of 2019. The study consisted of a descriptive approach that is suitable for the purposes of the study. The number of questionnaires distributed (300) The number of responses to a questionnaire was (260) and the number of questionnaire analyzed (256) which represents the average of (85%). The researcher used the SPSS statistical analysis software to analyze the collected data.

The study found that there is a statistically significant impact of information technology governance according to COBIT 5 framework on the quality of external auditing. There was an impact of the dimensions:

(covering the bank from start to finish, total empowerment, meeting the requirements of stakeholders, applying an integrated framework and separating governance from management). The Jordanian commercial banks are interested in information technology governance in accordance with the COBIT 5 framework at a high level. As recommended by the study to maintaining the prestigious level reached by information technology governance according to the COBIT 5 in the Jordanian commercial banks.

4. Study by Abu Taha (2021), the relationship of information technology governance to the quality of financial reports, a field study from the perspective of employees of the Jordanian Ministry of Finance.

This study aimed to show the relationship of information technology governance according to the dimensions of (COBIT 5) represented in (planning and organizing, owning and implementing, support and delivery, follow-up and evaluation, guidance and control) with the quality of financial reports represented by the qualitative characteristics of accounting information (appropriateness. Honest representation, comparability, portability For understanding, verifiability, appropriate timing) from the point of view of the Jordanian Ministry of Finance, and the study population and its sample may consist of (accountants, information technology employees, managers and their assistants, auditors. Auditors, systems analysts, data entry) in the Jordanian Ministry of Finance, whose number is approximately (184) male and female employees, Where the researcher made a questionnaire and it was distributed to (150) male and female employees, where (132) male and female employees responded to it, and (3) questionnaires were excluded due to the incomplete answers of the respondents to them. The statistical package for the

social sciences (SPSS) was used in the various statistical analysis, namely descriptive statistics and the internal consistency coefficient (Cronbach's alpha), as well as the multiple linear correlation test using the Pearson correlation coefficient and the coefficient of variance inflation, and also the multiple linear regression analysis was used. The study reached many results, the most important of which were: The existence of a statistically significant relationship between the governance of information technology according to the dimensions of the framework (COBIT 5), presented in (planning and organization, ownership and implementation, support and delivery, follow-up and evaluation, guidance and control) and the quality of financial reports represented by qualitative characteristics Accounting information (relevance, honest representation, comparability, understandability, verifiability, timeliness) from the point of view of the employees of the Jordanian Ministry of Finance.

The study concluded with many recommendations, the most important of which is the need for the Jordanian Ministry of Finance to continue to apply information technology. Governance and to generalize this application to the entire public sector.

5. Haroun's study (2018), The role of information technology in national strategic planning by application to the Ministry of Agriculture, Livestock and Irrigation, Khartoum State.

The purpose of this research is the role that information technology plays in national strategic planning by focusing on the Ministry of agriculture, livestock and irrigation the Khartoum State Government, using descriptive analytical and deductive approach. Search for several most important results reached, strategic planning role in raising the

efficiency of workers in the field of information technology, Ministry of agriculture, Ministry of agriculture information network media provide help on linking to external sites and easily share information and get it in time, funding is important Computer center of information technology, Ministry of Agriculture of the implementation phases of the it strategy in line with the strategy of the Ministry of agriculture. The most important recommendations of the Ministry of agriculture researcher adequate budget and continues to develop and modernize information technology system of the Ministry, the need to pay attention to the training of all employees to take advantage of information and communication technology in their sectors of the Ministry, the establishment of databases contribute to Implementation of strategic plans for the Department of agriculture for all sectors of the Ministry of agriculture.

Theoretical framework

Introduction

The COVID-19 pandemic has worsened on a global scale, leading to significant challenges in project management and implementation. However, information technology has proven to be not only a powerful tool in addressing these challenges, but also a key factor for the success of projects in this difficult period. This article aims to explore the relationship between IT and project success during the COVID-19 pandemic. Information technology enables companies and institutions to continue working remotely. Thanks to online communication and collaboration tools and cloud software, teams can work from anywhere, at any time. This contributes to keeping projects underway and achieving the desired goals despite geographical restrictions and social isolation.

Information technology tools, such as email, chat applications, and virtual conference platforms, enhance communication and collaboration among team members participating in the project. Information and ideas can be exchanged quickly and effectively, and tasks can be better coordinated and responsibilities distributed. This contributes to improving the quality of implementation and delivering the project on time. Information technology offers advanced project management tools. Project management software enables effective planning, monitoring and tracking of project progress. Resources, schedules and tasks can be accurately monitored, potential problems identified and corrective action taken quickly. This enhances the chances of success and reduces potential risks.

In light of the COVID-19 pandemic, information technology provides opportunities for innovation and development. Technology can be used to develop serious solutions and new technologies that help adapt to the challenges resulting from the pandemic. For example, artificial intelligence and machine learning can contribute to analyzing big data related to the pandemic and provide valuable insights for decision-making. Virtual reality and augmented reality technology can support remote training and educational processes and provide realistic experiences for projects. Security and data protection are critical factors in the success of projects, especially in light of the increasing security threats during the pandemic. IT provides advanced solutions to protect data and secure digital infrastructure for enterprises. These measures include data encryption, restricted access, intrusion detection systems, and other measures that enhance the overall security of projects. Information technology has played a crucial role in the success of projects during the COVID-19 pandemic. By enabling remote work, improving communication and collaboration, improving project management, promoting innovation and development, and ensuring security and data protection, IT contributes to enhancing the chances of success and overcoming the challenges caused by the pandemic. Projects must take advantage of available technology opportunities and employ them effectively to achieve their goals and succeed in this exceptional period.

Technology concept

The word technology consists of the word Techno and the word logy. The word technology is Arabicized from the Greek word (Techno), which means skill or craft, and the word (logy), which means science or art. Technology means the science of skills or arts, and in

terminology it is defined as the organization and effective and effective use of human knowledge and experience. Through methods with high applied efficiency (Abdul Rasoul Mustafa Saeed Jiballah (2019)).

(Qtaishat Rania Jaafar (2021)) stated that the concept of technology varied according to the opinions of researchers depending on their different points of view. There are those who believe that technology is the development of plans, processes, and products of goods and services with the external and internal environment in order to help the organization excel over competitors (Madi Hisham Kamel (2019)), while others define it as the technical methods and processes that an organization uses to change inputs such as materials, knowledge, energy, and capital into outputs represented in goods and services.

From the above, the researcher believes that technology is the processes, techniques, machines, and businesses used to transform input data, materials, and ideas into outputs, information, products, and services, to develop production processes and methods used, leading to reducing production costs.

(Bara Samir (2020)) stated that technology has three dimensions consisting of hardware and equipment, software, and brainware intelligence support systems, where the hardware and equipment contain different logical physical means that are concerned with selecting equipment to achieve goals and objectives, while software is a set of rules and procedures. It is concerned with the use of devices and equipment, and intelligence devices contribute to the performance and operation of hardware and software. Figure No. (2) (1) shows the essence of technology and its supporting activities that contribute to enhancing competitive advantage.

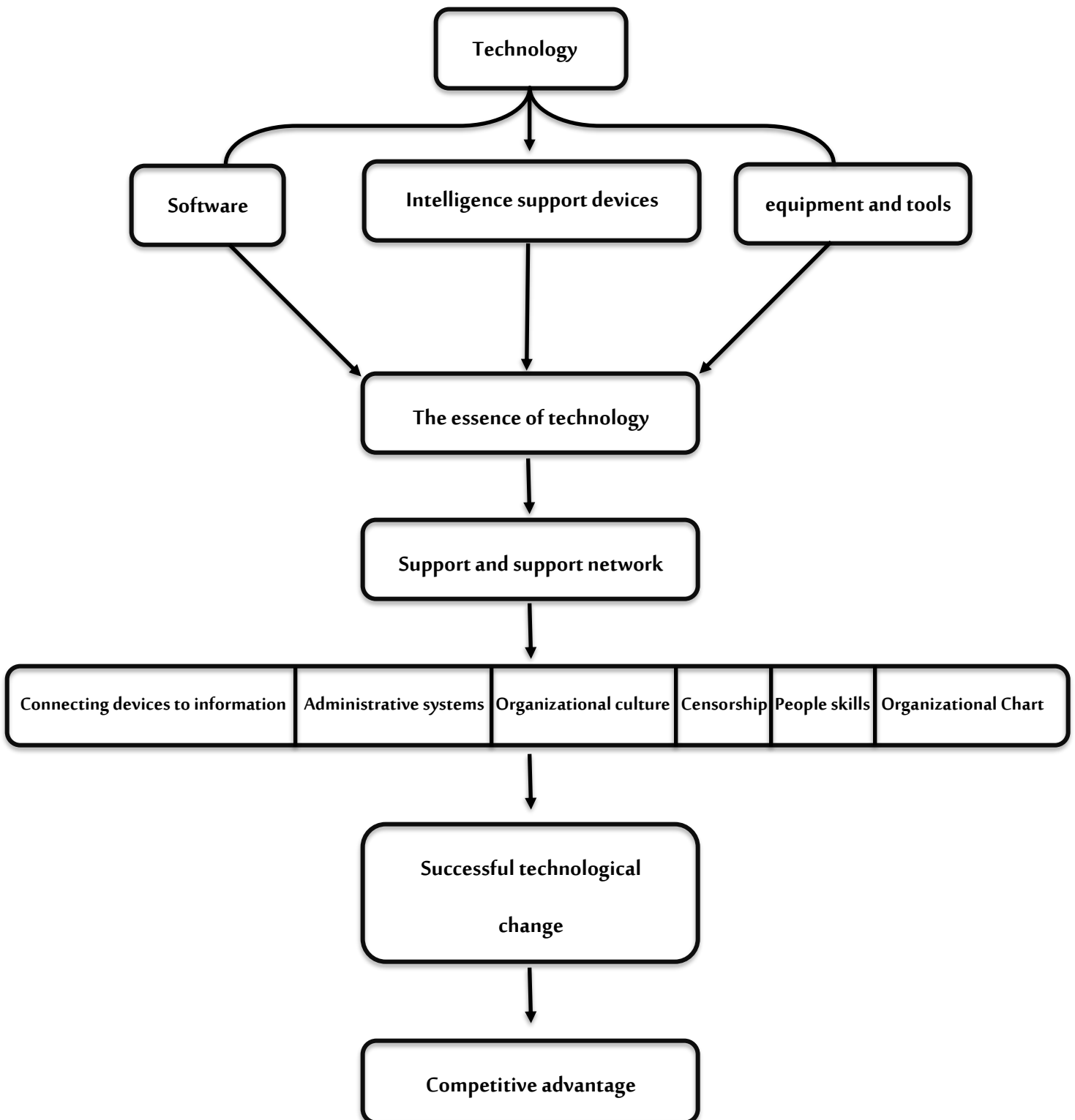


Figure No. (1) Dimensions of technology

2.1.1 Technology fields

Technology includes means and tools that include equipment, devices, resources, and information through which it is possible to expand the physical and mental work horizons that are directed to discovering and applying new knowledge, or technology related to a product, service, or process technology. It includes three basic areas (Al-Malkawi Ahmed Fawaz (2022)):

1. Product technology is concerned with transferring ideas into new products and services by providing new knowledge and ways of performing work and production, which requires coordination and cooperation between the various operations of the organization to meet the desires and needs of customers.
2. Process technology is concerned with the methods and procedures that contribute to the performance of work within the organization. It is the machines and devices that lead to the production of products or the provision of services.
3. Information technology focuses on technologies related to acquiring and transmitting information with the aim of the organization obtaining the best decisions necessary to provide new products and services. It includes the process of collecting, processing and distributing appropriate parameters, especially computer-based technologies.

In light of the above, the researcher believes that the concept of technology, as it includes means and tools that include equipment, devices, resources and information, which are directed to discovering new knowledge and applying it, must be linked to modern computer and

communications technology, which is expressed by information technology, which is the modern concept of technology that includes technology containing tangible physical parts. Such as: devices, equipment, infrastructure, networks and devices attached to these parts, as well as intangible parts such as software and databases. It also includes human resources, which are considered the main element of this system.

Accordingly, this study took into account the third field of technology, which is information technology, and studied its impact on the success of projects by applying it to the Tawakkalna application.

2.1.2 Information technology - concept and content

Information is defined as a collection of data organized and coordinated in an appropriate combination, such that it gives a special meaning and a homogeneous combination of ideas and concepts, enabling its user to benefit from it to access and explore knowledge (Al-Hiasat Abad Bashir (2022)).

As for information technology, it is a very precise system consisting of a set of tools used to store, analyse, process, broadcast and transmit information in all its forms according to standards applied by computer programs and other technology to process systems and improve information services that the user may be unable to provide through traditional methods in light of the extent of the complexity and inflation of information. (Al-Habis Mahmoud Abdullah Muhammad (2022)).

This concept was influenced by the emergence of modern computer and communications technology, as it unites computing systems with rapid means of communication, for the purpose of transmitting and exchanging various data and information. (Ashraf Qesm Al-Sayed (2019)) indicated that information technology is defined in the following parameters:

1. It is the new science that is concerned with collecting, decorating, and disseminating various types of data and information.
2. It is the science of processing various types of information through modern means, to communicate knowledge.
3. A wonderful interaction between computers and various means of communication, such as optical fibers, satellites, and other technology, in order to control information and invest it in multiple fields.

emphasizes that information technology helps in building and strengthening the organization's strategic capabilities by providing the best information inside and outside it, in a way that strengthens the organization's relationship with other parties, improves and increases the interconnection and integration between parts of the organization, and generates an information stock that helps in developing jobs and activities. And operations.

(Ahmed Awad Haj Ali (2022) indicate that it is the technological aspect of the information system, which represents the physical components, software, databases, networks, and other media that process information to re-broadcast it to the concerned parties in the appropriate form and timing. (Al-Rawashdeh Study (2021) also defined information technology as that framework

that includes computer science, information systems, communication networks and their applications that work to activate information and harness it to serve the organization's goals.

Accordingly, the researcher believes that information technology can be defined as all the processes, techniques, methods, and devices used to transform input materials, data, and ideas into valuable outputs, information, products, and services, to be stored, retrieved, and transmitted internally and externally, with the required speed, effectiveness, and accuracy required by contemporary business, through means of communication. Which is modern and diverse.

2.1.3 The importance of information technology

The importance of information technology emerges from the fact that it helps companies obtain the information required to perform their work effectively. A successful organization is the one that can balance between the abundance of information and its scarcity. Information technology helps companies find new opportunities and its importance increases by providing broad and accurate information for all company activities (Al-Afif, Jamal Hassan Issa (2021).

Information technology in projects has become an important factor in facing successive and continuous changes to improve productivity, reduce costs and improve decision-making as well as strengthening relationships with customers and developing new strategic applications by providing information to make effective decisions to increase performance and achieve success (Khaled Ahmed Ibrahim (2018). Information technology enjoys high flexibility and scalability through the use of multi-purpose technologies (Badr Omar. (2019), working to give a comprehensive, integrated view of the organization, giving it the ability to streamline its operations and make it flexible and interactive with its environment (Walid. (2019).

indicates that information technology works to develop the performance of organizations through the availability of an actual work force within the organization, works to increase the effectiveness of administrative communication channels between various departments, provides effective control in operational processes, and reduces the size of administrative organizations in the structure. Organizational, and helps save time for senior management and devote them to more important work.

Information technology has facilitated a lot of project work, such as managing relationships with customers, managing internal and external communication channels (Salami, Khadija. (2021), and managing the production and distribution of products, as it is considered one of the main resources for business organizations because of its effective contribution to transforming inputs into outputs in a more distinguished way, as (Hussein Ibrahim. (2022) pointed out. pointed out that technology is a combination of skills, knowledge, capabilities, techniques, resources, machines, computers, and tools that people use in order to transform or change raw materials into final goods and services that have value.

(Iyad Bashir. (2022) explains that the breadth of technology fields in most projects, including technological, organizational, financial, and marketing aspects, has a significant impact on the success or failure of project work plans.

Information technology helps in centrally controlling the work and activities of the project with the aim of achieving coordination between data sources and the possibility of processing, sharing and exchanging it, setting standards for the quality and source of data, and the possibility of applying restrictions related to confidentiality.

Information technology in projects includes designing effective systems to collect accurate and realistic data on a regular, comprehensive and unified basis about aspects of the project, to record information related to project activities, and to provide a base of accurate information about project resources and activities that quickly meets the requirements of decision makers, planners and stakeholders at various levels. Obtaining data and information in an accurate and easy-to-retrieve manner, while achieving security and integration in a better way, especially in cases of unexpected disasters, which contributes to developing the core capabilities that give organizations high competitive advantages (Muhammad Khair Salim. (2021), which contributes to achieving Survival, growth and profitability.

The researcher believes that information and communications technology has a high value in bringing about effective and efficient improvements that increase the efficiency of the project's operational and administrative processes, and works to provide the necessary information to make constructive decisions to support the project's success, represented by achieving survival, growth and profitability, with the necessity of providing some kind of flexibility in using technology and applying it according to a method. An actor who leads to outstanding project performance.

2.1.4 IT elements

Kurniawati, M. A. (2021) define the elements of information technology as the infrastructure used to describe the group of computers, applications, networks, and software that process and distribute information.

(mrani, N. (2020) also point out that it is the shared technological resources that provide the basis for information system applications in the organization, and they consider it to consist of hardware, software, and other services. (Qaffas, A. A. (2019) considers that the elements of information technology consist of hardware, operating systems, software, networks, communications, data management, users, storage, and the Internet. (Xu, B. (2023) indicates that the elements of information technology infrastructure consist of hardware, software, databases, networks, and other

devices. Accordingly, information technology includes the basic elements as shown in Figure (2), which are: hardware or physical components, software, databases, and networks, and human resources. They complement each other and are interconnected in a way that makes the system work in an effective manner.

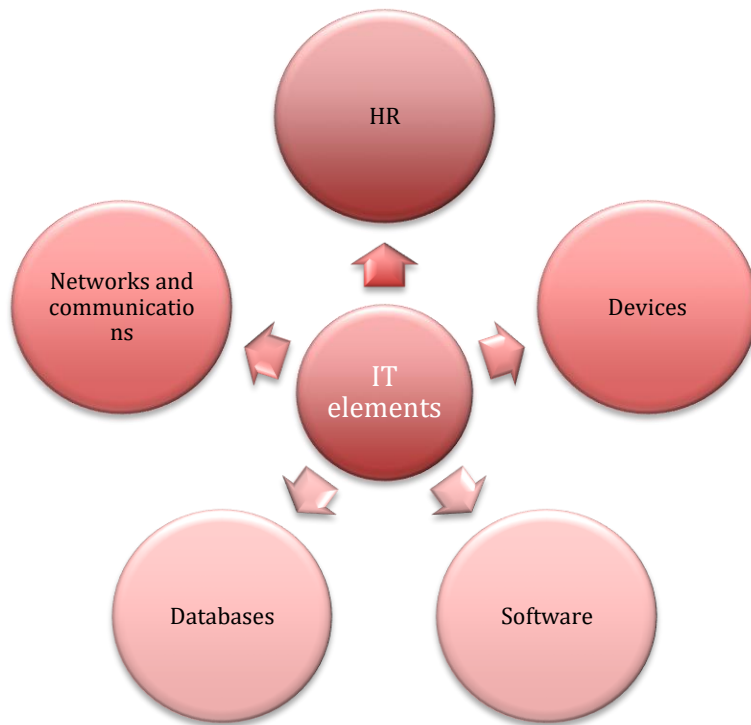


Figure No. (2) Elements of Information Technology

Source: Prepared by the researcher, based on the previously mentioned sources

Project success

Introduction

The tremendous developments in the field of information technology have witnessed an important challenge for projects operating in the information and communications technology sector, through planning, organizing and managing the changing needs of the parties involved in the project, and working to collect, analyse, process, store and transmit information electronically inside and outside projects, through an experienced and qualified team that enjoys... With the required skills, in order to complete the project within the specified time period and budget and in light of the agreed upon volume of work (Dwyer, R. J. (2019), which allows project management to meet the aspirations of the project's stakeholders, as well as having the competitive advantage that works to achieve the project objectives of In survival, growth and profitability.

2.2.1 Project concept

The Project Management Institute (PMI) defines a project as a temporary activity that is initiated to create a unique product, service, or result. It is a group of interconnected activities aimed at achieving a specific goal in a specific period of time, beginning and end, through... Human, material and financial resources. The British Project Management Association has defined a project as a group of interconnected, non-routine activities with specific beginnings and ends, which are implemented by a person or organization to achieve specific performance and goals.

(Mujtaba, B. G. (2022) also defined it as the effort expended in determining the resources needed for implementation according to the time, cost, and specifications desired by consumers.

(Huo, B. (2021) believes that a successful project includes managing and implementing plans

within the powers and responsibilities specified in the project, working to implement the established plans and bearing the results, all within the expectations of consumers. (Mujtaba, B. G. (2022) defined the concept of the project by saying that it is a system that includes the following elements: inputs, constraints, outputs, and work mechanisms. According to Figure (3), this model is considered a means of understanding the project through the system model, which analyzes the project into inputs, processes, and outputs under a set of constraints and using Various mechanisms.

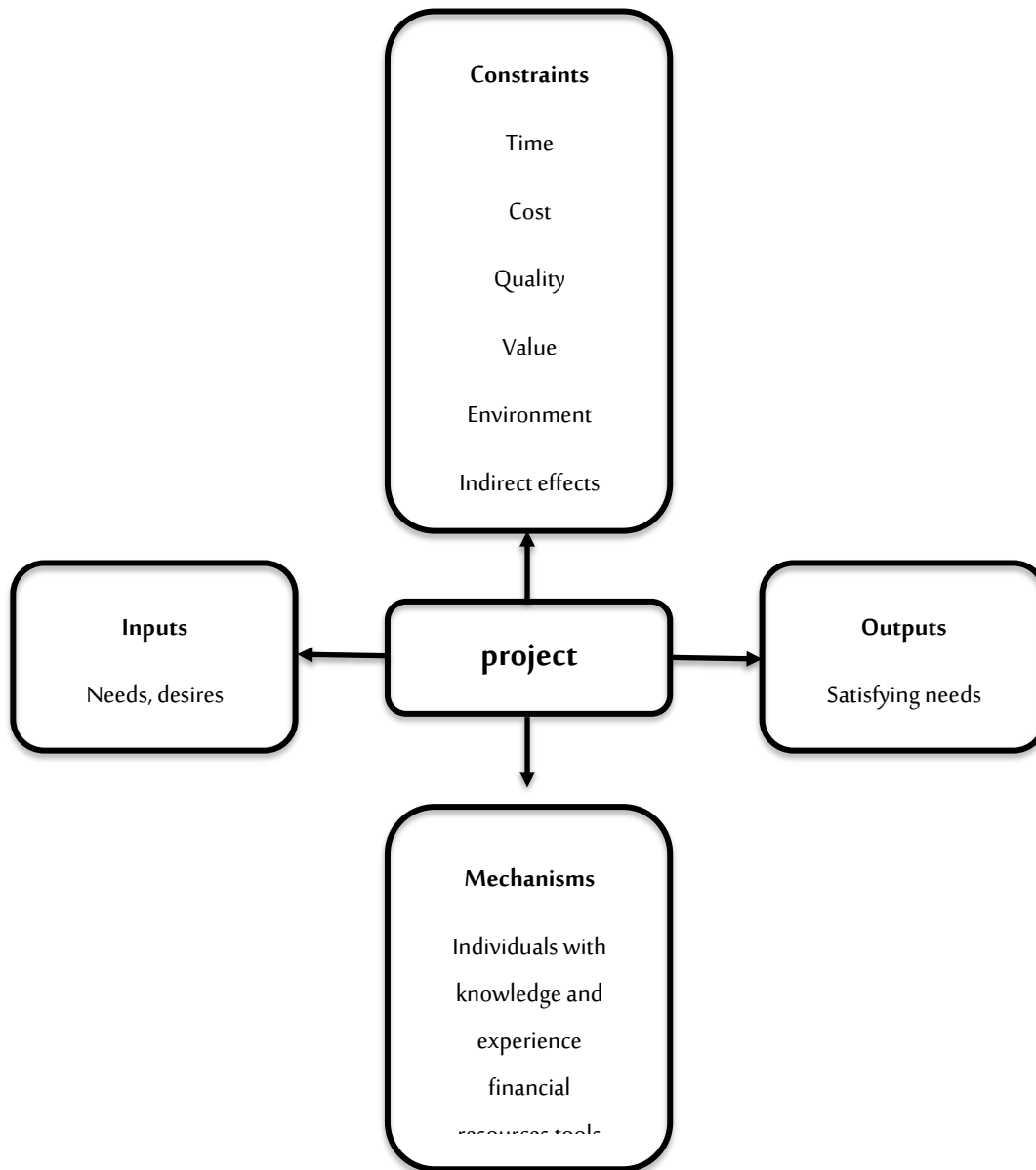


Figure No. (3) Project concept according to the ICOM model

Source: Prepared by the researcher, based on the previously mentioned sources

From the above, the researcher believes that a project can be defined as interconnected and organized efforts and activities with a specific starting and ending point that works to achieve

specific goals, by employing human, financial and material resources and investing them in an optimal manner, and works within the constraints of cost, quality and time.

2.2.2 Project life cycle

Every project has its own life cycle that starts from one point and ends at another point. This helps in organizing and managing the project, analyzing the reasons for its potential success, and developing mechanisms for its sustainability. There are many researchers who have dealt with the project life cycle and tried to classify its stages. However, with different approaches, the essence of the project life cycle is It is similar in most ways, and one of these classifications deals with the project as a set of successive and sequential steps that achieve the goal of the project, as Huo, B. (2021) referred to the project life cycle according to a model he called the (4D) symbol, and according to this model the project goes through stages The following, as shown in Figure (4):

1. Define it stage
2. Design it stage
3. Do it stage
4. Develop it stage

Level of development of activities

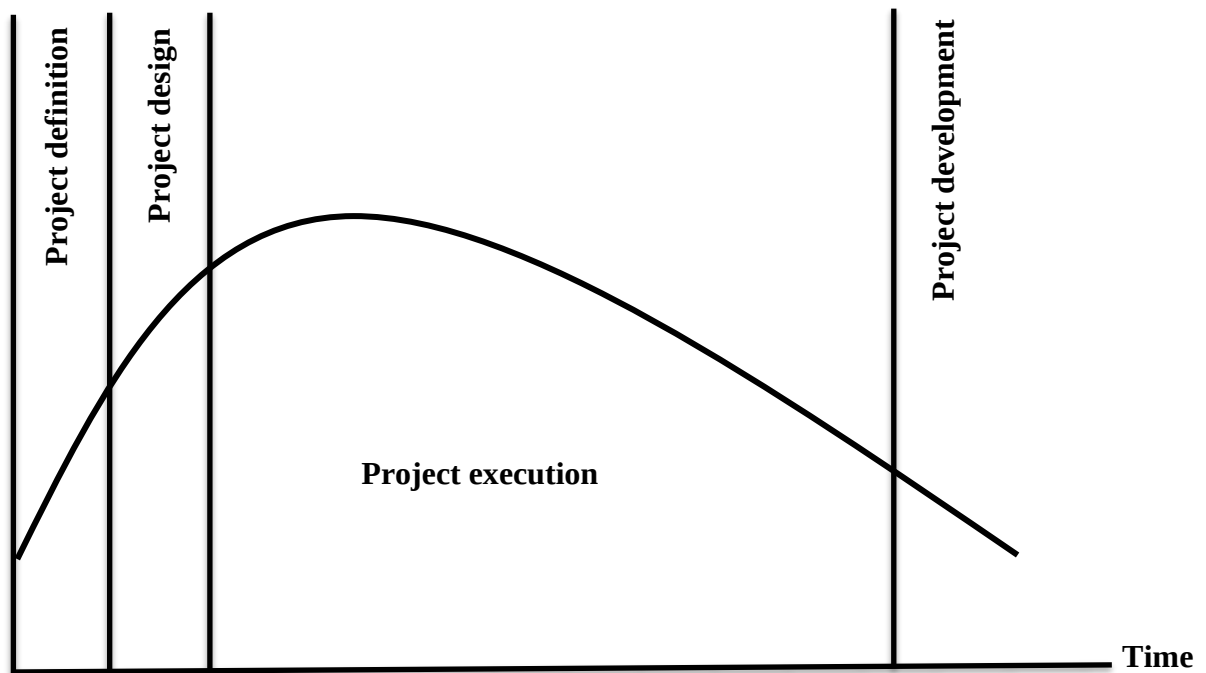


Figure (4) Project life stages

Source: Maylor, H., (2003), *Project Management*, Ed in Burgh Gate Parson Education

limited

Project management is concerned with understanding, perceiving and analyzing the surrounding internal and external environment. To identify the available opportunities and threats facing the project in the (external environment), and to analyze its strengths and weaknesses in the (internal environment), to form the overall picture of the project, in an effort to excel in the business environment by possessing and maintaining a competitive advantage to win over its competitors (Mohamed, A. (2019).

The project environment has a major role in the success or failure of the project by responding to the conditions and factors of the external and internal environment, minimizing the negative effects that may occur, and seizing the available opportunities (Skare, M. (2023).

2.2.3 Tawakkalna application

The Saudi Data and Artificial Intelligence Authority “Sadaya” launched the “Tawakkalna” application as the most important application used in the Kingdom of Saudi Arabia in the current period due to the services it provides, as well as its indispensability for movement and entry into institutions and governmental and non-governmental agencies, as the application provides many services, the most important of which is process management. Granting permits electronically and clarifying the health status of the application user, which confirms that the person has completed all doses of the COVID-19 virus vaccine and has become “immune to the virus.” There is also a health status card sharing service and a COVID-19 examination service that allows Tawakkalna users to book an appointment for a COVID-19 examination and review. Examination results through the application with all ease and ease, the COVID-19 vaccine reservation service and the health passport, the caution mode service, the service for creating gatherings, and the “manual registration for the gathering” service. Health-related services were also made available during the ban period, including: answering health questions to support the Ministry of Health in following up on those. Cases, reporting suspected cases, and communicating this to the relevant authorities to help the user receive health services, a permit to walk for one hour a day within the neighborhood, and an emergency medical permit (Saudi Data and Artificial Intelligence Authority, 2021).

The concept of the COVID-19 pandemic

The COVID-19 pandemic is the infection of a large number of individuals with the Covid (19) virus over a wide geographical area, as infection with this virus causes respiratory infection, and the world is witnessing a widespread spread of the virus at the present time. Tamin and Harid, (202). While Gharbi and Badroni (2020) considered it to be A large spread of the COVID-19virus (Covid 19), which led countries around the world to take global quarantine measures and keep millions in their homes. As for Van der Weijden (2020), he defined the COVID-19virus pandemic as an epidemic that occurs in very large areas, covering all parts of the world in passing. International borders, and affects a large number of people. Al-Awadhi et al., 2020, believes that the COVID-19 pandemic is an outbreak of a contagious disease caused by a virus that belongs to a large family of viruses COVID-19 virus that causes diseases that may be mild or serious and fatal, as for the World Health Organization Global (2021) The COVID-19 pandemic has been defined as the current ongoing widespread global spread of (Covid-19), which is the disease caused by the new COVID-19 virus called (SARS (2)) associated with severe respiratory syndrome. The spread of this disease has been massive and unexpected. As the number of new infections and the number of deaths in most countries of the world, and due to this large and unexpected increase, the World Health Organization declared this disease as a global pandemic, World Health Organization (2021).

Based on the previous definitions, the COVID-19 pandemic can be defined as a massive spread of the disease Covid (19), caused by a COVID-19virus that may infect humans and animals,

crossing continents in an extraordinary way and difficult to control, causing confusion locally and globally, and causing different and varying effects.

It is a difficult or complex health condition that affects the population of a region or a specific geographical area, affects the health of society, and causes loss of life and the economy. The severity of the crisis can be determined by the number of those affected within the geographical scope (Al-Anazi, 2020). Countries around the world are seeking to develop preventive policies to limit the spread of this pandemic and find an effective treatment to eliminate it (Ghabbouli and Tawaitiya, 2020 Al-Absi and Tijaniya, 2020).

There are health risks that must be dealt with in accordance with the instructions recommended by the World Health Organization as preventive and precautionary measures to prevent the transmission of infection, and they are very dangerous for people who suffer from chronic health problems, patients who suffer from immunodeficiency, and people over the age of 65 years, and From an epidemiological perspective, hygiene practices and contact bans seem to be necessary to contain the pandemic, but soon after the relevant preventive measures came into effect, it seems that many people did not accept the preparation for such behavioral changes and adjustments easily, and were rejected due to ignorance or inappropriate behavior. Careless interference in the lives and health of other people (Welter et al., 2021).

As of April 13, 2020, more than (1.85) million people have been confirmed infected with Covid (19), and although about (429,028) cases have recovered, the number of deaths has reached more than (114,331) cases worldwide, and most countries have recorded... Variable rates of Covid-19 cases and deaths, resulting in a significant burden on their health systems. As a result,

some of these national health systems have collapsed, lost control and become unable to provide health services to a large number of Covid-19 cases and others in need. (Alqutob et al., 2020).

Confirmed cases have risen sharply since mid-2020, but the true extent of this pandemic was not clear at the time, as 100 million cases of Covid-19 were recorded at the end of January 2021, about a year after the first case was reported. It was officially diagnosed with the virus, until it exceeded 180 million cases in mid-July (2021) (BBC News, 2021). The following figure shows the evolution of the number of cases of infection with the virus worldwide:

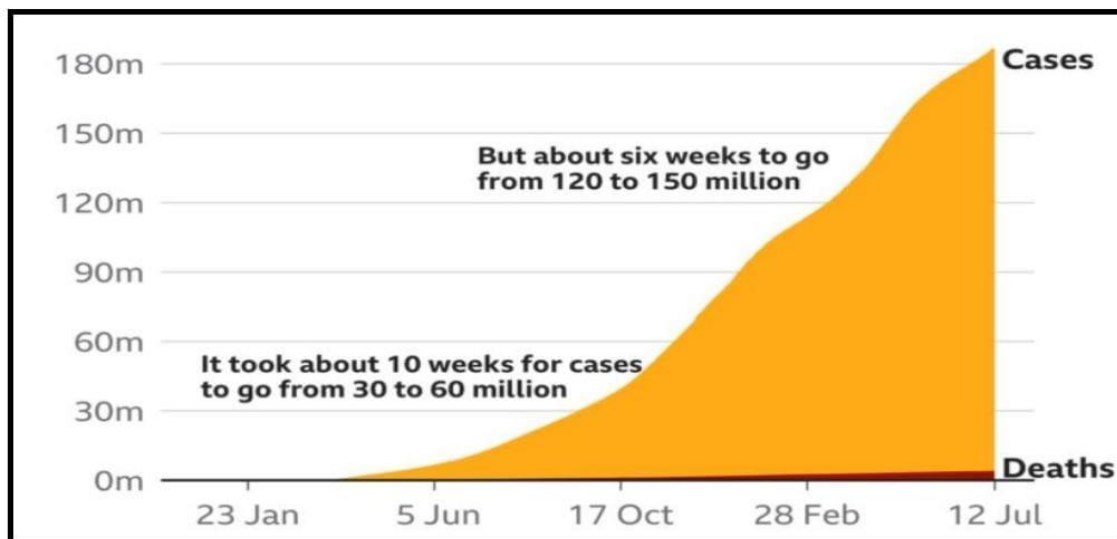


Figure (5) The number of COVID-19virus cases worldwide as of July 12, 2021.

Source: BBC News, 2021

Applied framework

This part presents the study methodology, its population, the unit of analysis, and a description of the characteristics of the application that represents the study sample, in addition to the study tools and procedures and the statistical treatments that were used in processing the data, and an explanation of that follows.

3.1 Study Approach

Based on the nature of the study and the information to be obtained from the opinions of the study sample members, and through the questions that the current study seeks to answer, the study was a field study based on the descriptive and analytical method of the data that was obtained through the questionnaire that the researcher developed, and based on a sentence Statistical means and tools to reach results that serve the objectives of the study, with the aim of identifying the impact of information technology in its dimensions (elements and characteristics of information technology on the success of projects by application on the Tawakkalna application for smart phones).

3.2 The study population, sample, and sampling unit

The study population consists of users of the Tawakkalna application, including university students, pilgrims and Umrah performers, who number (300) users.

As for the study sample, a random sample of users was selected. As for the sample size, the researcher was guided by the available literature in what is the scientifically acceptable percentage as a minimum sample size. If the sample size ranges between (30) (500) individuals,

then it is appropriate and consistent with the scientific method (Sekaran, 2009). (250) questionnaires on the companies under study, and (230) questionnaires were retrieved, i.e. (74%), while the questionnaires suitable for analysis were (220), i.e. (89.7%) of the questionnaires that were retrieved.

3.3 Statistical methods:

The research used the statistical program SPSS through:

- The Cronbach coefficient to calculate the level of stability of the study instrument.
- Pearson correlation coefficient to determine the level of internal consistency and validity of the study tool and to identify the relationship between the study variables.
- Proportions and frequencies to describe the characteristics of the study sample.
- The arithmetic means and standard deviation to describe the level of response of study sample members to the statements of the study tool.
- A simple linear regression equation to measure the effect between study variables.

3.4 Study tool

The questionnaire form consisted of two sections. The first section includes the personal data of the members of the study sample, and the second section includes statements about the study's axes: the information technology axis, which includes 4 dimensions and includes 16 statements, and the project success axis, which includes 10 statements. A five-point Likert scale was used.

Table (1) Likert scale correction method

Staging	Strongly agree	I agree	neutral	Disagree	Strongly disagree
Weight	5	4	3	2	1
Arithmetic mean value	4.20-5	3.4 – 4.19	2.60 – 3.39	1.80 – 2.59	1 – 1.79
Impact score level	Very high	High	medium	low	Very low

3.5 Believe the study tool:

First Theme: information technology

Table (2) Correlation coefficients First axis statements

Paragraph	Correlation coefficient	Statistical significance	Paragraph	Correlation coefficient	Statistical significance
Recruitment and recruitment			Performance Appraisal		
1	0.878**	0.000	1	0.858**	0.000
2	0.745**	0.000	2	0.890**	0.000
3	0.865**	0.000	3	0.834**	0.000

4	0.884**	0.000	4	0.870**	0.000
Training			Empowerment		
1	0.951**	0.000	1	0.879**	0.000
2	0.876**	0.000	2	0.903**	0.000
3	0.913**	0.000	3	0.896**	0.000
4	0.831**	0.000	4	0.700**	0.000

It is found that all the values of Pearson's correlation coefficients between the degree of each statement of the first axis and the total degree of the axis were statistically significant at (0.01), which shows the validity of the statements of the first axis of the questionnaire, which indicates that it is applicable to achieve the objectives of the study.

Second Theme: Project success

Table (3) Correlation coefficients Second axis statements

Paragraph	Correlation coefficient	Statistical significance	Paragraph	Correlation coefficient	Statistical significance
1	0.868**	0.000	6	0.730**	0.000
2	0.844**	0.000	7	0.759**	0.000
3	0.890**	0.000	8	0.798**	0.000
4	0.853**	0.000	9	0.841**	0.000

5	0.810**	0.000	10	0.811**	0.000
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It turns out that all the values of Pearson's correlation coefficients between the degree of each of the phrases of the second axis and the total degree of the axis were statistically significant at (0.01), which shows the validity of the statements of the second axis of the questionnaire, which indicates that it is applicable to achieve the objectives of the study.

3.6 Stability of the study instrument:

Table (4) Results of the stability of the study tool

Axis	Multi-paragraph	Cronbach thousand value
It	16	0.975
Project access	10	0.818
Total Questionnaire Form	26	0.966

It is found that the value of Cronbach alpha for all axes of the study instrument is greater than 0.70 and therefore this result shows that the study instrument is highly stable and sufficient to achieve the purposes of the study.

3.7 Characteristics of the study sample

- 1- **Gender:** 142 individuals were 64.5% male and 78 female (35.5%).
- 2- **Age:** 75 individuals were under 30 years of age (34.1%), 65 individuals aged 30 years to less than 40 years (29.1%), 60 individuals aged 40 years to less than 50 years 27.3%, and 20 individuals aged 50 years and over (9.1%).

3- Qualification: 40 individuals were found to have an intermediate qualification (18.2%), 120 individuals with a bachelor's qualification (54.5%), and 60 individuals with a postgraduate qualification (27.3%).

4- Table (5) Distribution of Study Sample According to Personality Characteristics

Rate %	Number	Categories	Characteristics
64.5	142	Male	Sex
35.5	78	Female	
34.1	75	less than 30 years old	Lifetime
29.5	65	From 30 years to less than 40 years	
27.3	60	From 40 years to less than 50 years	
9.1	20	50 years and above	
18.2	40	Medium	Qualification
54.5	120	Bachelor	
27.3	60	Graduatfe	

First Theme: Human Resources Management Strategies

Table (6)

Phrase	Arithmeti c mean	Standard deviatio n	Order	Approval level
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Information technology has contributed to facilitating Hajj and Umrah procedures during the Covid-19 pandemic.	4.182	0.778	1	High
Mobile and Internet applications are being used to provide information and guidance to Umrah pilgrims and pilgrims during the pandemic.	4.136	0.870	2	High
Information technology has contributed to improving the experience of Umrah pilgrims and pilgrims in terms of organizing travel and accommodation during the Covid-19 pandemic.	3.818	0.835	4	High
Information technology has helped reduce the time and effort spent on registration and documentation procedures for Umrah pilgrims and pilgrims during the pandemic.	3.864	0.870	3	High
Information technology has contributed to achieving transparency and credibility in health verification procedures for Umrah pilgrims and pilgrims during the Covid-19 pandemic.	3.909	0.951	2	High
The use of information technology applications contributed to achieving social distancing and implementing preventive measures for Umrah pilgrims and pilgrims during the pandemic.	3.727	0.864	3	High
Information technology has contributed to helping Umrah pilgrims and pilgrims during Covid-19 and improving their level of satisfaction and confidence in public safety procedures.	3.682	0.764	4	High

Information technology has helped achieve efficiency and continuous improvement in Hajj and Umrah procedures during the Covid-19 pandemic.	4.045	0.707	1	High
Information technology has contributed to reducing pressure on health facilities and organizing quarantine for Umrah pilgrims and pilgrims during the pandemic.	3.864	0.758	1	High
Information technology contributed to helping Umrah pilgrims and pilgrims during Covid-19 and achieving effective communication and coordination between the concerned authorities.	3.864	0.758	1	High
Information technology has helped facilitate health verification and medical examination procedures for Umrah pilgrims and pilgrims during the Covid-19 pandemic.	3.864	0.816	2	High
You support the idea of enhancing the use of information technology in organizing religious celebrations and important events for Umrah pilgrims and pilgrims during the pandemic.	3.773	0.851	3	High
Information technology has contributed to providing reliable sources for Umrah pilgrims and pilgrims to obtain information and guidance related to health and safety during the Covid-19 pandemic.	3.955	0.826	1	High

The use of social media applications and digital media contributed to enhancing communication and interaction between Umrah pilgrims and pilgrims during the pandemic.	3.955	0.826	1	High
You are promoting the idea of developing new technologies in the field of information technology to enhance the experience of Umrah pilgrims and pilgrims during normal times and in emergency situations such as the Covid-19 pandemic.	3.909	0.794	2	High
Information technology plays a greater role in developing security and safety strategies for Umrah pilgrims and pilgrims in the future.	3.773	0.999	3	High

The phrases of the strategy of recruitment and appointment were arranged in terms of the value of the arithmetic mean and it was found that (the first phrase) the most important with a value of 4.185 and a standard deviation of 0.778 and a high degree of approval while (the third phrase) the lowest value of 3.818 and a standard deviation of 0.835 and a high degree of approval and when studying the phrases of the strategy of recruitment and appointment, it was found that all phrases at the level of High approval, which shows a high level of application IT on the project success with an arithmetic mean of 4.000 with a standard deviation of 0.839.

The phrases of the performance appraisal strategy were arranged in terms of the value of the arithmetic mean and it was found that (the second phrase) the most important with a value of 4.045 and a standard deviation of 0.707 and a high degree of approval while (the third phrase) the lowest value of 3.682 and a standard deviation of 0.764 and a high degree of approval and when studying the statements of the performance appraisal strategy, it was found that all statements are

at a high level of approval, which shows a high level of application IT on the project success with an arithmetic mean of 3.841 with a standard deviation of 0.822

The training strategy phrases were arranged in terms of the value of the arithmetic mean shows that (the first and second phrases) the most important with a value of 3.864 and a standard deviation of 0.758 and a high degree of approval while (the fourth phrase) the lowest value of 3.773 and a standard deviation of 0.851 and a high degree of approval and when studying the training strategy phrases show that all phrases at the level of High approval, which shows a high level of application IT on the project success with an arithmetic mean of 3.841 with a standard deviation of 0.796

The terms of the empowerment strategy were arranged in terms of the value of the arithmetic mean, it was found that (the first and second phrases) the most important with a value of 3.955 and a standard deviation of 0.826 and a high degree of approval, while (the fourth phrase) the lowest with a value of 3.773 and a standard deviation of 0.999 and a high degree of approval and when studying the statements of the empowerment strategy, it was found that all the phrases at the level of High approval, which shows a high level of implementation mean of 3.898 with a standard deviation of 0.861.

From the above, it was found that there is a high level of application IT on the project success with an arithmetic mean of 3.895 with a standard deviation of 0.829.

Second Theme: Organizational Performance Strategies

Table (7) project success

Ferry	Arithmeti c mean	Standard deviatio n	Order	Approval level
The idea of using the Tawakkalna program to facilitate Hajj and Umrah procedures should be promoted during and after the Covid-19 pandemic.	4.591	0.493	1	Very high
The Tawakkalna program contributed to improving the experience of Umrah pilgrims and pilgrims in managing health and safety during the pandemic.	3.955	0.930	6	High
The Tawakkalna program has contributed to reducing crowding and organizing movement and presence at holy sites during the Covid-19 pandemic.	4.045	0.826	4	High
The Tawakkalna program is easy to use and interact with Umrah pilgrims and pilgrims during the pandemic.	3.864	0.970	7	High
The use of the Tawakkalna program should be enhanced in the future to facilitate Hajj and Umrah procedures and achieve efficiency in health management.	4.455	0.499	2	Very high
I felt confident in the level of safety and protection provided by the Tawakkalna program during the Covid-19 pandemic.	4.409	0.493	3	Very high

The Tawakkalna program has contributed to achieving effective communication and information exchange between Umrah pilgrims, pilgrims, and responsible authorities during the pandemic.	3.409	1.374	10	High
The Tawakkalna program is useful in providing health and religious information and guidance to Umrah pilgrims and pilgrims during the pandemic.	3.955	0.826	5	High
The Tawakkalna program has contributed to improving the organization and planning of services provided to Umrah pilgrims and pilgrims during the Covid-19 pandemic.	3.409	1.305	9	High
The idea of expanding and developing the features of the Tawakkalna program must be promoted to meet the needs of Umrah pilgrims and pilgrims in normal circumstances and in emergency situations in the future.	3.545	1.160	8	High

The organizational performance statements were arranged in terms of the value of the arithmetic mean. It was found that (the first phrase) the most important with a value of 4.591 and a standard deviation of 0.493 and a very high degree of approval while the phrase (seventh phrase) was the lowest with a value of 3.409 and a standard deviation of 1.374 and a high degree of approval and when studying the organizational performance statements it showed that three phrases at the very high level of approval and seven phrases at the level of High approval, which shows a high level of application IT on projects success with an arithmetic mean of 3.964 with a standard deviation of 0.888.

3.8 Assignment test

Main hypothesis: There is a statistically significant effect at the significance level ($\alpha \geq 0.05$) of using information technology on the success of projects.

Table (8)

P-VALUE	R	R2	F	t	b
0.000	0.903	0.815	960.048**	30.985**	0.461

It was found that there is a statistically significant direct correlation between human resource management strategies on organizational performance at 0.05 and it is found that there is a statistically significant direct effect of human resource management strategies on organizational performance at 0.05 and it turns out that (Using Information technology) explains 81.5% of the changes that occur in (Projects success) and it was found that the more Applying Information Technology by 1% project success increased by 0.461%, which illustrates the validity of the main hypothesis of the study.

The first sub hypothesis: There is statistically significant effect at the level (0.05) of the information technology elements and their dimensions on staying in the health sector.

Table (9) Impact of information technology elements and their dimensions on staying in the health sector

P-VALUE	R	R2	F	t	b
0.000	0.832	0.692	490.966**	22.158	1.637

It was found that there is a statistically significant direct correlation between recruitment and appointment strategies on organizational performance at 0.05 and it is found that there is a

statistically significant direct effect of recruitment and appointment strategies on organizational performance at 0.05 and it turns out that (IT) explains 69.2% of the changes that occur in (projects success) and it was found that the more Application of IT by 1% projects success increased by 1.637%, which illustrates the validity of the first sub-hypothesis of the study.

The second sub-hypothesis: There is statistically significant effect at the level (0.05) of the information technology elements and their dimensions on growth in the health sector.

Table (10) Impact of the information technology elements and their dimensions on growth in the health sector

P-VALUE	R	R2	F	t	b
0.000	0.876	0.768	720.440**	26.841**	1.775

It was found that there is a strong positive correlation with a statistically significant between performance appraisal strategies on organizational performance at 0.05 and it is found that there is a statistically significant direct effect of performance appraisal strategies on organizational performance at 0.05 and it turns out that (IT) explains 76.8% of the changes that occur in (projects success) and it was found that the more Application of IT by 1% Projects success increased by 1.775%, which illustrates the validity of the second sub-hypothesis of the study.

Third sub-hypothesis: There is statistically significant effect at the level (0.05) of information technology elements and their dimensions on profitability in the health sector.

**Table (11) Impact of information technology elements and their dimensions on
profitability in the health sector**

P-VALUE	R	R2	F	t	b
0.000	0.874	0.764	703.983**	26.533**	1.696

It was found that there is a strong positive correlation statistically significant between organizational performance training strategies at 0.05 and it is found that there is a statistically significant direct effect of training strategies on organizational performance at 0.05 and it turns out that (IT) explains 76.4% of the changes that occur in (projects success) and it was found that the more the application of IT by 1%, the greater the projects success by 1.696%, which explains the validity of the third sub-hypothesis of the study.

Fourth sub-hypothesis: There is statistically significant effect at the level (0.05) of information technology characteristics on the success of projects in the health sector.

**Table (12) Impact of information technology characteristics on the success of projects in
the health sector.**

P-VALUE	R	R2	F	t	b
0.000	0.872	0.760	691.117**	26.289**	1.650

It was found that there is a strong positive correlation statistically significant between empowerment strategies on organizational performance at 0.05 and it is found that there is a statistically significant direct effect of empowerment strategies on organizational performance at 0.05 and it turns out that (IT) explains 76% of the changes that occur in (project success) and it

was found that the more Implementation of IT by 1% projects success increased by 1.650%, which illustrates the validity of the fourth sub-hypothesis of the study.

Results and recommendations

5.1 Results:

- There is a high level of use of information technology in projects and their performance, as the arithmetic mean value reached 3.964 with a standard deviation of 0.888.
- There is a strong, statistically significant direct correlation between the use of information technology on the success of projects, and the presence of a direct, statistically significant effect of human resources management strategies on organizational performance. It turns out that whenever the use of information technology increases by 1%, the success rate of projects increases by 0.461%, which demonstrates the validity of the hypothesis. main study.
- There is a strong, statistically significant direct correlation between the use of information technology and the success of projects, and the presence of a direct, statistically significant effect of the use of information technology and the success of projects. It was found that the more the use of information technology in projects increased by 1%, the project success rate increased by 1.637%, which demonstrates the validity of the sub-hypothesis. The first to study.
- There is a strong, statistically significant direct correlation between the use of information technology on the success of projects, and the presence of a direct, statistically significant effect of the use of information technology on the success of projects. It was found that whenever the use of information technology increased by 1%, the success rate of projects

increased by 1.775%, which demonstrates the validity of the sub-hypothesis. The second is for study.

- There is a strong, statistically significant direct correlation between the use of information technology on the success rate of projects, and the presence of a statistically significant positive effect of the use of information technology on the success rate of projects. It was found that the more the use of information technology increased by 1%, the success rate of projects increased by 1.696%, which demonstrates the validity of The third sub-hypothesis of the study.
- There is a strong, statistically significant direct correlation between the use of information technology on the success rate of projects, and the presence of a statistically significant positive effect of the use of information technology on the success rate of projects. It was found that the more the use of information technology increased by 1%, the success rate of projects increased by 1.650%, which demonstrates the validity of The fourth sub-hypothesis of the study.

5.2 Recommendations

- Paying attention to maintaining the distinguished level of use of information technology and creating a larger number of projects that help overcome crises.
- Providing all the capabilities and needs through which a distinguished level of project performance and success can be achieved through the use of information technology.

- Researchers are conducting more research and studies related to the impact of the use of information technology on the success of projects, especially during the COVID-19 period.

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Appendices

Appendix (1)

Study tool (questionnaire)

Gentlemen and women

After Greetings

I ask you to kindly review and fill out the attached questionnaire, and choose the answer that suits your point of view, as I am preparing a thesis entitled “The Impact of Information Technology on the Success of Projects, an applied study on the Tawakkalna program during Covid-19” as part of the requirements for obtaining a master’s degree in the Project Management Department from the College of Administration.

This questionnaire aims to measure the extent of the impact of information technology on the success of projects during the COVID-19 period, and I appreciate your cooperation by providing information that expresses your opinion, knowing that your answer will be treated with complete confidentiality, and will only be used for scientific research purposes only.

Thank you for your cooperation and participation

Researcher:

Demographic information

1. sex

Male

☐

female

☐

2. Age

Less than 30

☐

From 30 to 40

☐

From 40 to 50

☐

From 50 or more

☐

3. Qualification

Medium

☐

Bachelor

☐

Graduate

☐

No.	Paragraph	Strongly agree	agree	neutral	disagree	Strongly disagree
The first axis: information technology						
1	Information technology has contributed to facilitating Hajj and Umrah procedures during the Covid-19 pandemic.					
2	Mobile and Internet applications are being used to provide information and guidance					

	to Umrah pilgrims and pilgrims during the pandemic.					
3	Information technology has contributed to improving the experience of Umrah pilgrims and pilgrims in terms of organizing travel and accommodation during the Covid-19 pandemic.					
4	Information technology has helped reduce the time and effort spent on registration and documentation procedures for Umrah pilgrims and pilgrims during the pandemic.					
5	Information technology has contributed to achieving transparency and credibility in health verification procedures for Umrah pilgrims and pilgrims during the Covid-19 pandemic.					
6	The use of information technology applications contributed to achieving social distancing and implementing					

	preventive measures for Umrah pilgrims and pilgrims during the pandemic.					
7	Information technology has contributed to helping Umrah pilgrims and pilgrims during Covid-19 and improving their level of satisfaction and confidence in public safety procedures.					
8	Information technology has helped achieve efficiency and continuous improvement in Hajj and Umrah procedures during the Covid-19 pandemic.					
9	Information technology has contributed to reducing pressure on health facilities and organizing quarantine for Umrah pilgrims and pilgrims during the pandemic.					
10	Information technology contributed to helping Umrah pilgrims and pilgrims during Covid-19 and achieving effective communication and coordination between the concerned authorities.					

11	Information technology has helped facilitate health verification and medical examination procedures for Umrah pilgrims and pilgrims during the Covid-19 pandemic.					
12	You support the idea of enhancing the use of information technology in organizing religious celebrations and important events for Umrah pilgrims and pilgrims during the pandemic.					
13	Information technology has contributed to providing reliable sources for Umrah pilgrims and pilgrims to obtain information and guidance related to health and safety during the Covid-19 pandemic.					
14	The use of social media applications and digital media contributed to enhancing communication and interaction between Umrah pilgrims and pilgrims during the pandemic.					

15	You are promoting the idea of developing new technologies in the field of information technology to enhance the experience of Umrah pilgrims and pilgrims during normal times and in emergency situations such as the Covid-19 pandemic.					
16	Information technology plays a greater role in developing security and safety strategies for Umrah pilgrims and pilgrims in the future.					
The second axis: project success						
17	The idea of using the Tawakkalna program to facilitate Hajj and Umrah procedures should be promoted during and after the Covid-19 pandemic.					
18	The Tawakkalna program contributed to improving the experience of Umrah pilgrims and pilgrims in managing health and safety during the pandemic.					
19	The Tawakkalna program has contributed to reducing crowding and organizing					

	movement and presence at holy sites during the Covid-19 pandemic.					
20	The Tawakkalna program is easy to use and interact with Umrah pilgrims and pilgrims during the pandemic.					
21	The use of the Tawakkalna program should be enhanced in the future to facilitate Hajj and Umrah procedures and achieve efficiency in health management.					
22	I felt confident in the level of safety and protection provided by the Tawakkalna program during the Covid-19 pandemic.					
23	The Tawakkalna program has contributed to achieving effective communication and information exchange between Umrah pilgrims, pilgrims, and responsible authorities during the pandemic.					
24	The Tawakkalna program is useful in providing health and religious information and guidance to Umrah pilgrims and pilgrims during the pandemic.					

25	The Tawakkalna program has contributed to improving the organization and planning of services provided to Umrah pilgrims and pilgrims during the Covid-19 pandemic.					
26	The idea of expanding and developing the features of the Tawakkalna program must be promoted to meet the needs of Umrah pilgrims and pilgrims in normal circumstances and in emergency situations in the future.					