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THE OBSTACLES OF E-MANAGEMENT IN IRAQ

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ABSTRACT

THE OBSTACLES OF E-MANAGEMENT IN IRAQ

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The main differences discussed throughout this research were included in this thesis. Public sector agencies are expanding and improving their program offerings and delivery methods to meet rising demand. Technology may help these organizations decrease costs and improve delivery. The intended application of a technology solution may vary per company. May be used to automate internal research by using tiny repositories and e-mail programs, or to boost public infrastructure efficiency by implementing an integrated framework between firms and consumers. Businesses of all sizes, whether self-employed, medium, large, public, or private, utilize technology. This applies to public and private businesses. These enterprises represent education, health, commerce, marketing, tourism, and banking.

This research investigates the link between common training and implementing E-Government. Patriarchal growth type organizations were linked with excellent performance, while traditional leadership institutions had less training owing to a less stringent educational norm. Because of this pressure, middle managers play a key role in adopting E-Government. Management positions are the principal target of e-government opposition for a number of reasons, including power loss and self-interest. This research also applies to government, indicating that some government initiatives, such as the Iraqi authority service (a program enforced by the

government to replace foreign employees with local (Iraqi) people), has an influence on e-government. Such regulations made it harder for non-Iraqi citizens to earn a life. Employees in centralized social structures were less able to adopt E-Government than those in traditional management systems. Staff engagement in E-Government decision-making was greater in group learning institutions than hierarchical ones. Hierarchical companies' top-down, self-governing decision-making sped faster adoption, despite poor employee approval.

Keywords: Political, Economic, Social, Technological, Management, Analysis, Electronic.



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ABBREVIATIONS

I.C.T	: Information Communication Technology
E.M	: Electronic Management
E.G	: Electronic Government
P.E.S.T	: Political, Economic, Social, Technological, And Analysis
S.L.E.P.T	: Social, Legal, Economic, Political, Technological
P.E.S.T.L.E	: Political, Economic, Sociological, Technological, Legal, Environmental.
P.E.S.T.L.I.E.D	: political, economic, social, technological, legal, international, environmental, and demographic factors.
VLAN	: Virtual Local Area Networks

1. INTRODUCTION

1.1 BACKGROUND

It will start out by explaining E-Government and providing E-Government with its first encounter. Next, the primary distinctions that were spoken about over the course of this investigation and that this thesis intends to cover [1].

Because of the increasing demand for the services provided by public sector agencies, these organizations are being forced to broaden and improve both their program offerings and distribution methods. These businesses have a variety of options made available to them by technology that may help them cut down on their operations and boost their delivery [2].

The anticipated purpose of usage might cause a technological solution to differ from one organization to the next. May be used to automating internal research through the utilization of small repositories and electronic mail (e-mail) programs, or it may be used to increase the efficiency of the existing infrastructure to the public through the implementation of an integrated framework between businesses and customers. It is also uncommon for businesses of any size, whether they are self-employed, medium or big, public or private, not to use technology. This is true whether the business is in the public or private sector. [3] These businesses are representative of a wide variety of industries, including the education and health sectors as well as trade, marketing, tourism, and the banking industry.

As a consequence of this, the many components of information technology (IT) play a significant part in the process of shaping the government [4, 5], despite the fact that their purpose is not yet well understood [4]. Organizations are the backbone of the IT industry. Despite this, the operational tactics of the infrastructure have not been brought up to date. The use of the web, e-mail, and the internet in general is expanding as well. Because of the many different implications for political and bureaucratic changes, such as the beginning of the digital era, the current mode of operation has shifted to a digital play that is capable of involving the government as well as government agencies, organizations, and cultural barriers. This change was brought about by the advent of the digital era. [2] In addition, these advancements are currently in progress, and it is anticipated that they will lead to far more

comprehensive alterations that will effect information management and completely automated ways of operation. Information and Communications Technology, or ICT for short, has had a considerable impact on public policy, as well as on all of an organization's internal policies and procedures, as well as on international collaboration. I.C.T. has emerged as a critical component in the process of liberalizing the public sector. This may be accomplished through the creation of novel technologies or through the redesign of existing messaging and knowledge structures. Either way, this transformation enables improved methods of managing and contributing to the political process and provides adequate channels [3].

However, these new advances bring with them a new set of challenges, not the least of which is the issue of cyber management and the need for legislation to keep up with the legal repercussions of these new developments. As a direct result of this, the progression of technology throughout the world pushes public and private organizations to continue offering their programs by using software and internet technologies. The initiatives of many governments, on the other hand, have just started to be implemented online. E-Government, also known as interactive democracy, may also be referred to as online government, as pointed out by Fountain. According to the definition provided by the E-Government, a fountain is "the generation and distribution of government and government-to-government information and services utilizing a variety of I.C.T." [4]

In addition, the World Bank defined e-government as "the use of information technologies by municipal agencies (such as broad-based networks, the internet, and the mobile computer industry) that may revolutionize the ties between residents, companies, and other arms of government"[1].

In spite of this, the majority of federal agencies really employ a wide range of distinct methods to supply Internet services to its customers. These methods include inclusive government, E-Government, public democracy, and international administration. Electronic residency was just recently introduced in Estonia, and the nation is now open to citizens from all over the globe who are authorized to establish companies and bank accounts in Estonia as well as take on the role of an electronic resident. The phrase "E-Government" is widely used, and the meaning of

the word would be used in this study to encompass all of these electronic resources. These are the definitions that are being used. The methods themselves are not the subject of this research; rather, the emphasis is on the variables that influence how those approaches are implemented. Give your support to the following viewpoint:

"Information technology policy services are sometimes referred to as "e-government," which is a broader idea of administration that is based on information technology. The principal tasks are carried out with the assistance of electronic control. [5].

It demonstrated that E-Government need to be a program with the goals of increasing public service efficiency together with management and profitability. In addition, it said that governments planned to implement e-government. It is expected that the increased productivity and performance brought about by the introduction of new technology would also result in an increase in the government's capacity to investigate and address various types of illegal activity. The majority of researchers have agreed with this. They noted that the use of e-governance will help to lowering potential for criminal activity and boosting openness within the government. Ionescu has also lately restated his belief that e-government plays an important part in the battle against corruption [10]. Despite this, the emergence of new technologies has often resulted in the development of novel and difficult-to-implement safeguards, such as cyber-attacks and the manipulation of information and financial transactions conducted over the internet by institutions and organizations.

The development of these kinds of technological advances is being impeded by a great number of roadblocks. As can be seen in Figure 1.1, according to Pacey[11], the process of development is impacted by three different influences: cultural, technological, and organizational.

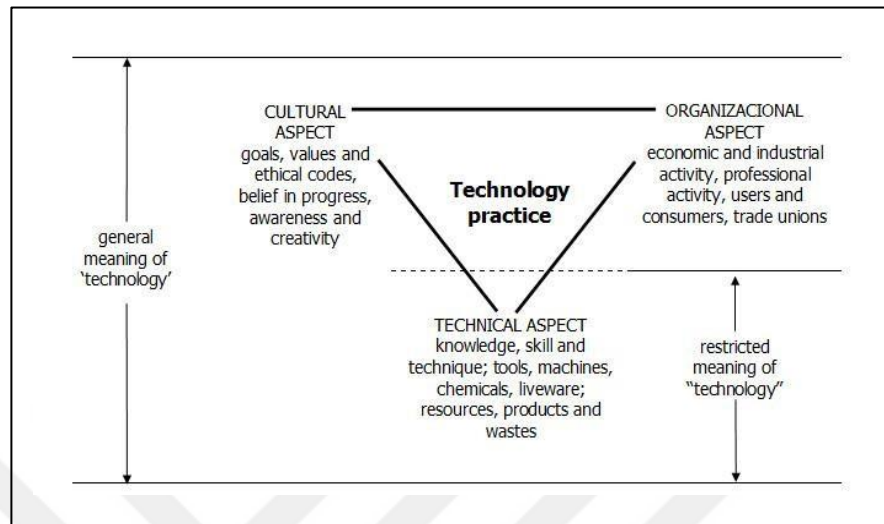


figure 1.1 : Shows how culture, organizations and techniques are interrelated

Cabrera provided a report based on a survey that was carried out by a special interest group consisting of 45 renowned I.T. researchers in the UK. This study was funded by the UK Department of Industry, which is concerned with issues related to I.T. Between eighty and ninety percent of IT was reported. Works had a hard time doing what it set out to do [13]. The most important finding was that the failure might be attributed to an insufficient attention for the non-technical components of the scientific aspects. Cabrera made the observation that the efficiency of each new system has played an essential part in personal matters throughout his life. In addition to this, they noted that emerging technologies needed to be altered in order to pose a threat to existing jobs and topologies. In the alternative, the structure and architecture of organizations will need to be modernized in order to meet the requirements of contemporary technology, as was recently mentioned by Creswell and Sheik[13] in the context of the implementation of health information systems. In order to ensure that technical developments were properly used, we referred to the "careful juggling act" that was required between economic, social, and linked challenges. In point of fact, Nograek and Vintar[14] discover that "fundamental components of organizations are interconnected, which means that improvements in one of them generate changes in the other." These "basic elements of organizations" include systems, frameworks, persons, technologies, and development.

1.2 THEORIES FOR STUDY

Bandyopadhyay and Fraccastoro [6] informed researchers who have currently worked on research the role of technology in computing and vice versa that despite the fact that more research needs to be done into the relationship between the two, the connection between the two is still not clear. The reason for this is because there is a need for more study into the relationship between the two. In point of fact, the definition of the group encompasses a wide range of subtleties. That occurred more recently, according to this theory. It is suggested that researchers ought to concentrate more on how information systems interact with the community, both at regional and global levels—careful recognition of the interlink ages between technologies and society, both in the context of the domestic setting and in relation to the environment. Only a small number of researchers have chosen to conduct empirical research on the topic of technology acceptance, despite the fact that there is a very important role for the literature to play in this area. He said that [15] "Most I.S. The researchers suggest that multinational companies ought to consider cultural gaps in order for digital technology to be applied effectively."

According to the recommendations made by Harper and Utley, [16] "Companies would always discover linkages with the I.T. The originality the way it interacts with already existing information." According to Sharma and Yetton[17], "the effective creation of advances in information systems continues to be a conceptual and intellectual issue."

These investigations have shown that knowledge management interacts effectively and dynamically with the usage of information systems (I.S.), and they have critiqued previous study efforts for their capacity to reduce the complexities of this relationship to a single significant factor in their theories. Alshawhi and Basahel [7] have brought attention to some of the more recent research that has been done on the connection between managerial support and information systems. The topic of discussion that was included in this report is now being put into action. Because of this, it is essential to identify the impact that training from well-established organizations has had on the implementation of e-government. The analysis of the relevant literature reveals that this connection calls for a deeper level of investigation and discussion.

Bekkers and Meijer [8]

The ever-changing difficulty of the study into e-government was brought to readers' attention. The second of these two publications proposed a meta-theoretical method for dividing different experiments into one of four categories, with each category being determined by the degree to which an individual research concentrated on the topic at hand:

- i. Comprehending vs Being Explained to
- ii. the concept of holism in contrast to individualism.
- iii. Modification versus maintenance.

A study of 116 newspaper stories published between 2017 and 2022 revealed the following. When compared to the category 'understand,' it was discovered that the vast majority of items (88%) fell into the category 'explain.' Utilizing quantifiable data in a way that mistreats more interpretative approaches that are focused on 'understanding' outlines a majority of research that is based on a positivist methodology. The current study focuses on identifying society and researching the influence that society has on the implementation of e-government in an effort to fill the gap that has recently been identified in the academic literature [9].

Bekkers and Meijer [8] have found a strong prevalence of recent review publications on a comprehensive method to E-Government based on the development of knowledge structures and an in depiction of the position of different players in the plurality of papers on E-Government (57.8 percent) having a holistic viewpoint. This method to E-Government is based on the development of knowledge structures and an in depiction of the position of different players. These publications focused the majority of their attention on the framework, but they did not precisely study how systems affected the conduct of individual players (Meijer and Bekkers). This topic, which is sometimes disregarded, has been extensively covered in recent review articles, including the most current research, which focuses on the behaviors, attitudes, and common beliefs that are prevalent inside companies.

Between the years 1990 and 2016, Lai, PC [10] looked at a total of 80 research papers from a variety of periodicals. They came to the conclusion that the findings that looked at ways of living concentrated on the impacts of society on the adoption of new technology, the adoption as well as access to information technology, its usage and effects of information communication, and the influence of I.T. Civilisation. society. In addition, the study that is being done right now focuses on the effect that the deployment of e-government will have.

"it is important to consider whether a specific data promotes or restricts the idea of developing an information system," write W. Indeje and Z. Qin [11] in their cultural study and even the implementation of a computerized accounting software structure in Kenya. This is because "it is important to consider whether a specific data promotes or restricts the idea of developing an information system."

In contrast, this kind of study was conducted for Arab nations. In a review method that seems to overemphasize the need to explain technology implementation processes, Meijer highlighted the importance of cognitive, cultural, structural, and political values integrated into organizations and, as a result, the justified use of research articles from developing nations as a successful context for developing countries. This was accomplished by highlighting the importance of cognitive, cultural, structural, and political values integrated into organizations. This is supported by Joseph[20], who, on the hegemony of Europe, North America, and Asia as a global history for E-Government research, commented on the possibilities for researching regions such as the arab world. He said, "The results of the research do highpoint the opening for studies focusing on areas such as the arab world. to the existing E-Government discussion." [19].

Because of this, there is a requirement for research into the expansion of acceptance of information systems (or possibly information technology) in general and adoption in particular. Additionally, there is a requirement for research into the implementation of e-government in the context of the Middle East. In a sense that is accurate, the goal of this research is to find a solution to this vulnerability by focusing on one of these nations, namely Iraq. In this, the role that the previous experiences of Iraqi public sector organizations had in the implementation of E-Government is discussed.

This research decided to do a review on Iraq since the country is now in the process of developing its electronic government. In Iraq, the implementation of an electronic government was made official once the CFA institute's Electronic Policy Transition Program was approved [12]. Up until this point, every organization has been working on the preparation and implementation of new projects on their own. The planning process for the government of Iraq revealed the beginning of an increase of the use of electronic government in the organizations that are part of the public sector. According to a survey that was carried out by the Information Technology Authority in the year 2018, it was discovered that some

organizations had a high degree of implementation, some organizations had a medium level of implementation, and other organizations had not yet begun the process of implementation at the time. Also as a result of this, one of the reasons why this work is being done is to analyze and determine why such variations have occurred, as well as to identify the factors that may have affected the level of implementation of E-Government within the various organizations. This work is also one of the causes for why this work is being done. In addition, it was very important to investigate the effects that the environment had on the degree to which the directive was implemented, in particular on the basis of the objectives of the literature concerning the effect that knowledge had on any and all applications of the directive that involved information technology and the United States.

Given that each entity will have dominant learning that differentiates it from other firms, the present study focused on an approach to identify dominant learning styles for various public organizations. The goal of this assessment was to determine the extent to which growth has had an impact on the implementation of E-Government, particularly in the case of Iraq.

1.3 AIM OF RESEARCH AND OBJECTIVES

In developing countries like Iraq, where a lack of knowledge of information protection and threats in E-Government projects is more than just a technical problem, which is most applicable to research, the goals of the study are to:

- i. Investigate the interaction between the ethos of the public sector and the introduction of E-Government in Iraq.
- ii. Identify the security challenges that will impede the adoption of E-Government projects in developing countries like Iraq.
- iii. Determine the security challenges that will impede the adoption of E-Government projects
- iv. Employing a knowledge tool to conduct an assessment of the organizations that make up the Iraqi public sector in order to conduct an analysis of the impact that technology has had on the implementation of E-Government.

1.4 RESEARCH QUESTIONS

The purpose of this test is to determine the impact that the information gathered has had on the implementation of e-government in Iraq's public entities. In light of this, two research questions have been developed in order to provide an answer to the primary aim of this study, which are as follows:

- i. What is the true nature of the connection between the dominant culture in Iraq and the growth of the country's electronic government?
- ii. In what ways does the information that was acquired have an impact on the process of implementing e-government in Iraq?

And This study focuses on the implementation of E-Government by conducting an investigation into the relationship that exists between the most common kind of training and the process of putting E-Government into practice. It was observed that patriarchal growth style companies would be connected with a high amount of performance, however conventional leadership institutions have been associated with a lesser level of training due to their association with a less rigorous educational standard. In point of fact, as a result of this pressure, middle managers now hold a crucial position in the process of implementing E-Government. Management positions have been regarded as the primary target of a significant amount of resistance to the implementation of e-government for a variety of reasons, including concerns about loss of power and protection of self-interest. This study also applies to the realm of government, demonstrating that certain policies implemented by the government, such as the Iraqi authority service (a policy mandated by the government to replace foreign workers with local (Iraqi) residents, with more than 54 percent of foreign workers), had an effect on the idea of e-government. This was due to the fact that it was discovered that such policies made it more difficult for eligible non-Iraqi nationals to make a living. In addition, it was discovered that the ability of employees in companies with centralized social structures to implement E-Government was very restricted in comparison to the capability of workers in businesses with conventional management structures. In addition, it was discovered that staff involvement in E-Government decision-making was

significantly higher in group learning institutions than in hierarchical type organizations. Hierarchical organizations had a more top-down, self-governing decision-making process that helped speed up an organization's implementation, despite the fact that employee acceptance was low. [13].

In light of the findings of this study, a number of suggestions have been formulated in order to encourage the implementation of procedures within organizations in the Iraqi public sector. It is anticipated that any of the results can be replicated in certain settings, despite the fact that this framework may act as a factor that prevents the results from being generalized to a larger population. In spite of the deficiencies of the context, it is essential to comprehend the phenomenon in its significance, which is what Max Weber meant when he used the term "verstehen," and to comprehend the meaning and goal of human action Chowdhury. [14], ... order to get a comprehensive understanding of the influence that training has on the implementation of e-government. In any case, the findings are meant to be extrapolated to a wider range of nations and to provide a groundbreaking methodology for investigating the role that education plays in the implementation of e-government in a variety of jurisdictions throughout the world.

1.5 SUMMARY OF CHAPTER

This chapter provides the reader with the first point to join the E-Government by demonstrating the traditional method of doing research in the form of a thesis for academic study. It also discusses how researchers address the challenges they face. In the next chapters, we will make an effort to discuss the ways for protecting models as well as some of the hazards that are associated with the implementation of e-government.

1.6 OUTLINE OF THE THESIS

Security Model and Risk Assessment for Methods in the E-Government Model are Discussed in Chapter 2.

The study presented in this Chapter demonstrated that the creation of E-Government entities was dependent on a reliable network as well as adequate protection methods.

Methodology and Design of Research, which is Covered in Chapter 3

This chapter provides an explanation of the research and development methodology that was utilized in order to evaluate users' perceptions about public e-services in Iraq and to assess their perception of e-services barriers and to determine the links between e-services assessment and barriers assessment by suppliers on the one hand and the actual city of the art in e-services on the other.

Tests and Results of the Research in Chapter 4

According to what is described in the acronym, these four domains constitute the core of this model. The ideal validation for the digital and online government.

Chapter 5 is the Conclusion and Suggestions Section.

The findings of the suggested analysis as well as the recommendations that are required to be included in the subsequent thesis, together with any and all activities that the researcher participated in.

2. LITERATURE REVIEW AND BACKGROUND

2.1 INTRODUCTION

The confidentiality, availability, and integrity of data, information, and computing resources are the fundamental concepts that serve as the primary objectives for their respective security systems. This chapter describes the idea of risk Test as well as its methodologies for risk assessment based on a neural and wavelet neural network, which was developed by William Stallings and Lawrie Brown [15]. The theory behind computer network security models is also covered in this chapter.

2.2 INFORMATION SECURITY MODELS

In the realm of computer security, frameworks were often developed as an instrument to assist in the investigation of various "health" qualities. The security of information gives rise to a wide variety of difficulties and concerns for both commercial and governmental institutions. Types that are employed because they are the most effective technique to illustrate architectural designs or new concepts for it A security model is a document that outlines the requirements that must be met in order to appropriately implement and enforce a certain security policy. There are a variety of applications for security models, including [16]:

- i. Ensure that a certain policy is both full and consistent by conducting tests.
- ii. A report on the technology.
- iii. Contribute to the visualization and design of the security system's implementation.
- iv. Determine if the application in question fulfills their requirements.

When modeling a system, there are three distinct types of representation that need to be taken into account. The graphic below illustrates these points of consideration (2.1).

For Modelling a system three different representation forms must be taken into considerations. These considerations are shown in figure (2.1).

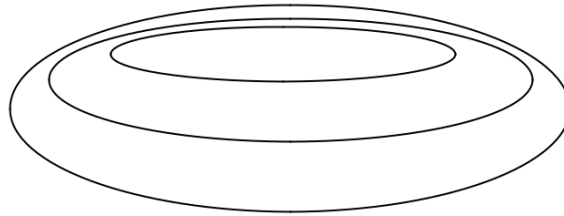


figure 2.1: Three representation forms of a model

The conceptual paradigm represents the theoretical and idealized version of the actual structure, which includes all paradigm principles. The formal model is the formalized representation of the conceptual model, consistent with the well-defined formalism of modeling, quantitatively describing the conceptual model, and thereby planning many methods for its solution. The executable model implements the formal model technically and provides additional information allowing the method to be executed and functioned on a computer or in a computer network.

2.3 LOGICAL REPRESENTATION FOR MODELLING

A scientific model is a way of defining a structure that makes use of mathematical terminology. A quantitative model for the Security Framework can help to determine the optimal mix of all sublayers to achieve a high level of protection for businesses that want to introduce an e-service or exchange details electronically. This can be accomplished with the assistance of a model that can help determine the optimal mix of all sublayers.

The discipline of logic places a significant emphasis on the validation of reasoning. The criteria that are offered by the logic would be used to check the legitimacy of the position that was taken from a given set of cityments in order to determine whether or not that position should be taken. The field of logic is not tied to any particular language or body of arguments in any way. The rules that were used to encode the reasoning are thus not reliant on the so-called inference laws of any particular language. The discipline of logic is a strategy for organizing statements written

in natural languages, such as the logic shown in figure 2.2 below. A scientific model is a way of defining a structure that makes use of mathematical terminology. A quantitative model for the Security Framework can help to determine the optimal mix of all sublayers to achieve a high level of protection for businesses that want to introduce an e-service or exchange details electronically. This can be accomplished with the assistance of a model that can help determine the optimal mix of all sublayers.

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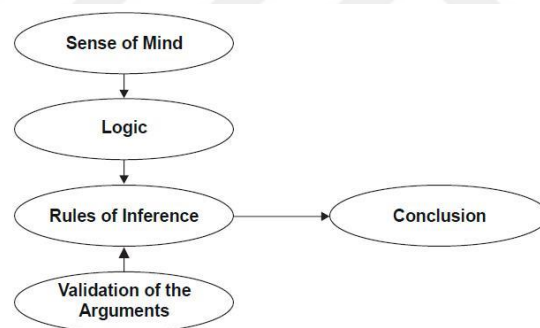


figure 2.2: logic system

2.4 MODEL FOR THE EVALUATION OF MULTIPLE LAYERS OF INFORMATION SECURITY (SECURITY MODEL)

The primary objective of modern security assessment models is to use electronic governments as a source of information. However, their primary purpose is to assist in the visualization of a couple of different levels of security in order to develop a mechanism that can improve the level of security of any e-enabled entity.

The platform will have a solid foundation and a greater rate of performance if as many levels or layers as feasible are added to it. These levels and layers will shield businesses from the many

different kinds of hazards that are involved with using one or more e-services. Additionally, the number of potential dangers posed by the e-service will decrease as additional layers are added. For instance, the technology layer will address all of the concerns pertaining to the technical aspects of an e-service, whilst the policy and competence levels will deal with the issues pertaining to the human element of the service. The five levels were selected using information gleaned from the business world and reported on in academic literature [17] for their respective relevance as components of any comprehensive security operation. Figure 2.3 depicts the following layers: the layer of technology; the layer of policy[27]; the layer of skills; the layer of administration and performance; and the layer of decision. The layers were considered in terms of their relevance, the scope of their organizational activity, and the ways in which they provide support for one another before the levels were developed.

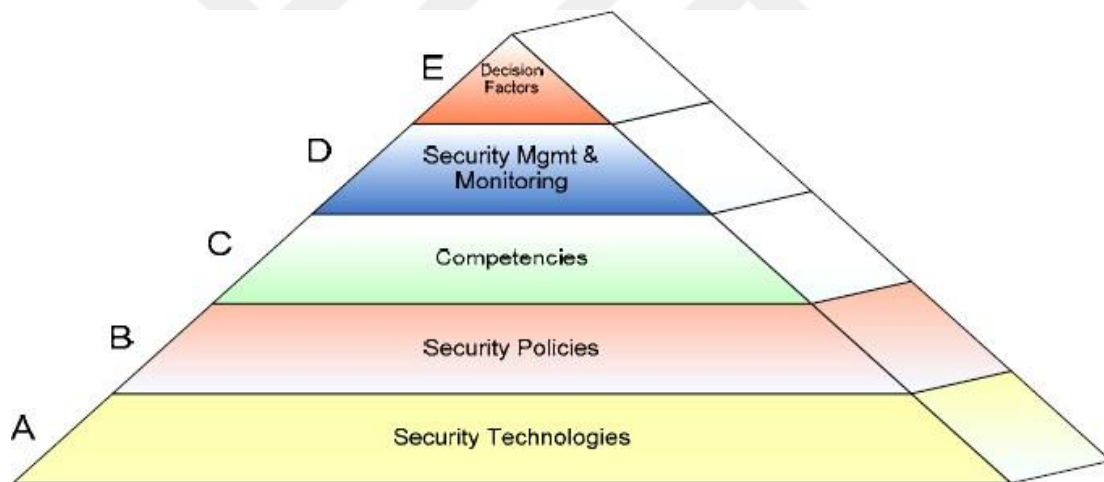


Figure 2.3: Multi Layers Model

Because each level contains more than one sub layer, the layout evolved into a matrix-oriented system. Within this system, each level was divided into numerous sublevels in order to keep the structure consistent and easier to comprehend. Because these layers are separated from one another by sublayers, it is possible to expand the existing model into an unlimited number of cells, depending on the requirements of the organization. In addition, the number of layers could change in the not-too-distant future as a result of new study or a fresh look at the relevant literature. The concept of giving x-number of layers with y-numbers of cells in each layer and

the combination of both to create a higher level of protection is what the author refers to as a "contemporary model." as well as a "fresh strategy" [17].

2.5 ADDITIONAL SECURITY ELEMENTS FOR SECURITY MODEL

This section provides a description of some significant security aspects that will be added to the Security Model, as well as an explanation of their significance.

2.5.1 Virtual Local Area Networks (VLAN)

A VLAN may be used to technically establish several LANs using the same physical switch. Additionally, it can be used to provide access control to computers in logical network segments based on the regulations governing the security of the network [18]. VLANs are the technology of choice for segmenting networks for a number of reasons. It's possible that connecting additional hosts is the answer to the security concerns at hand. The use of virtual local area networks (VLAN) makes it possible to divide a single broadcast domain into two or even more domains, which might restrict users' access to certain network resources. It is possible that it will be a useful addition to the company's compliance strategy and customer experience plan. The right design of services and VLANs, the restriction of unused ports, and the implementation of an access control system are some of the components that are required to ensure the safety of a switch setup. Using VLAN software inside the switching bridge adds an additional layer of defense against potential intruders to the network channel. Figure (2.4) illustrates how switches eliminate the various elements and how six VLANs were utilized to construct a network architecture specific to each department.;

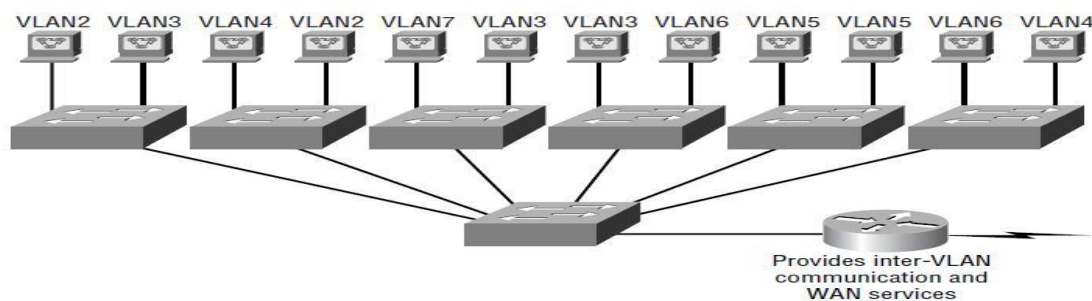


Figure 2.4: VLAN segmentation

- i. A high-security group of users can be put into a VLAN so that no user outside the VLAN can communicate with them.
- ii. By creating multiple broadcast groups, VLANs can improve network security and have control over each port.

2.5.2 Non-Repudiation

Non-Repudiation provides protection against the possibility that one of the people involved in the communication may deny having participated in any portion of the contact or the correspondence as a whole. A non-repudiation clause prevents either the sender or the receiver from denying receipt of a letter that has been conveyed. Non-repudiation is such a fundamental security characteristic that it is necessary for many programs that are used by the government online. It would improve people's faith in E-Government apps while also increasing the trust that government entities have in such applications.

Certain conditions have to be satisfied before a non-repudiation may be included in an online record. [19]:

- i. Proof of origin: there has to be a direct and incontestable relationship between the person who created the online record and the record itself.
- ii. 2. A demonstration of honesty by ensuring that the written record will not be altered in any way or ignored after it has been handed in.
- iii. 3. The non-repudiation platform must to be validated by an impartial third party.

The following categories of non-repudiation are shown:

- a. 1. The privilege of non-repudiation may be bestowed onto several aspects of the transaction of electronic records.
- b. 2. Non-Repudiation of Source: The non-repudiation of source gives the receiver with assurance of the identity of the originator (that is, the originator is authenticated) as well as the authenticity of the text.
- c. 3. No-Repudiation of Submission: The no-repudiation of submission feature provides the creator of an electronic document with the certainty that the document has been sent to the delivery agency.

- d. 4. Non-repudiation of delivery: the originator must be satisfied that the message has been conveyed to the intended recipients without having its validity compromised in order for this requirement to be met.

2.5.3 Education and Consciousness-Raising

The purpose of recognizing, training, and supporting computer security is to improve safety in [15] the following ways:

- i. Raise people's knowledge of the need of protecting network resources.
- ii. Increasing internet users' skill sets or depth of information in order to make their work on the internet more secure.
- iii. Acquiring in-depth experience in areas where it is important to do so in order to establish, implement, or run legal protection for organizational structures
- iv. Education and training in security is an essential component of an all-encompassing and efficient security system. This component ensures that workers are aware of the significance of, and their involvement in, the development and monitoring of security within the department.

2.5.4 Departmental Security Procedures and Procedure Manual

A security policy is a legally binding statement of the ground rules that must be followed by those who are granted access to an organization's technological and informational assets. The management, protection, and dissemination of sensitive information are all governed by a system of rules and procedures known as information security. Companies run the risk of suffering data loss, employee time loss, and efficiency loss in the absence of a stringent protection policy that every employee will adhere to. This is due to the fact that workers may have to spend time fixing gaps, restoring bugs, and retrieving missing or corrupted data, amongst other things. Applications developed using information technology have to comply with stringent safety regulations. [20] .

2.5.5 Methods of Social Manipulation

Workers in the electronic government sector need to be made aware of the dangers posed by this kind of assault since social interactions have a significant place in Iraqi culture. The manipulation of finances is a misuse of both human behavior and human behavior. Attacks on consumers' rights to social control are particularly detrimental, because they often provide a threat to customers' rights to bodily protection.

Any effort to acquire unauthorized access to information or resources by means other than hacking hardware or software may be considered an example of social engineering. This kind of endeavor can also be classified as "social engineering." In most cases, a dash of intuition and some awareness of the activities or routines of the target are all that are required to carry out a successful assault, provided that certain conditions are met. The term "social engineering" refers to the non-technical approaches that hackers use in order to gain access to networks [21].

2.5.6 Cyber Crime

Hacking, stealing data, and committing acts of cyber terrorism are all examples of cyber crimes, which refer to criminal activities that include the use of the internet and include a variety of destructive acts [25]. The commission of cybercrime is comparable to the commission of any other type of crime due to the fact that, in this instance, an illegal act must involve a linked computer network, either as an entity of a crime, as a tool used to commit crimes, or as a quantity of knowledge related to a crime. This is the case because cybercrime is a relatively new type of crime. Several studies have shown that the following individuals are the most likely to be responsible for the cyber crime:

- i. Insiders
- ii. Hackers
- iii. Organized crime gangs
- iv. 4Former workers who are still angry with their former employer

2.5.7 Team for Responding to Incidents in Computer Security (CSIRT)

In the case that an organization is subjected to an assault on its computer security, an intrusion may be discovered or another form of computer security breach may take place. It is essential for enterprises to have channels via which they may react effectively and rapidly. Establishing a formal incident response or a Computer Security Incident Response Team is one approach that may be used to satisfy this need (CSIRT). [22] The objective of the Computer Security Incident Response Team (CSIRT), in the event of an accident, is to monitor and minimize any damage, lines up, provide prompt and efficient rehabilitation, avoid potential future incidents, gain visibility into the risks against organizations, and reduce recovery costs.

2.5.8 Physical Layer, Version

The security that is given in areas that are physically separate from a computer network is referred to as "physical safety." The use of police, sirens, and barriers are common forms of internal defensive measures that are designed to dissuade overt attacks. Physical protection places an emphasis on the need of authentication for computers that are running Web servers, as well as the means by which such devices may be safely secured in a protected area. The use of physical protection is one method that is used to prevent thieves from gaining access to the facilities in order to acquire data that is stored on files, devices, or other media [30]. There are several implementations of physical security, such as the use of alarms and surveillance cameras, as well as other identity management tools and site layout considerations.

2.5.9 Data Sensitivity

There are several repositories that store material that is considered to be secret. As a working notion, let us suppose that private data are specifics that should not be made available to the general public. Certain databases, such as the index of a public library, do not retain any secret information. On the other hand, certain databases, such as those pertaining to defense, are completely open to the public. [23].

2.6 RISK AND SECURITY WITH REGARD TO INFORMATION SYSTEMS

There is no doubt that further development of e-government would lead to an increase in the need for network security. Protection of the E-Government network has quickly become one of the most major problems that must be taken into consideration in the context of expanding E-Government. Protection of E-Government is a vital concern in the regulation of the formation and expansion of E-Government. The management of computers is an essential part of an organization's information infrastructure since businesses are exposed to a wide range of cyber threats. [24].

It is important to identify and analyze the security devices, the related dangers and hazards, and the repercussions of a possible security event in order to identify and implement the necessary safety measures. This is required in order to identify and implement the necessary safety measures. An inquiry has to be carried out in order to analyze the following things before protection policies can be determined for e-government facilities:

- i. Assets that need to be protected.
- ii. 2. The appropriate categories of dangers and the possibility that they may materialize.
- iii. 3. Several distinct categories of danger
- iv. 4. the possibility of the city being destroyed.
- v. 5. A collection of security flaws inside the system

Nevertheless, the use of computer network technology has spawned a number of concerns that need to be addressed. The highest priority should be placed on people's safety. Because of the rapid expansion of e-government, it is becoming more important to improve one's understanding of security and to adopt effective preventative measures in the fields of policy and engineering. This is because of the increased likelihood of cyberattacks.

2.6.1 Risk Management

One definition of risk is the possibility that an effort may be made to take advantage of a weakness in the asset. Because there is a possibility that an effort will be made to exploit the weakness of a valued item, there is a threat that exists as a result of this possibility. To phrase it another way, the three components of risk are the assets, the vulnerability, and the threat.

Because of its worth, the asset is an attractive target for an attacker. Because of the asset's lack of strength, there is a possibility that it may sustain damage or become unusable. Risk is the possibility of an assault that might take advantage of the susceptibility of an asset to attack; the principle or rule, as well as the countermeasures that correspond to it, are most easily depicted in the form of a figure (2.5).

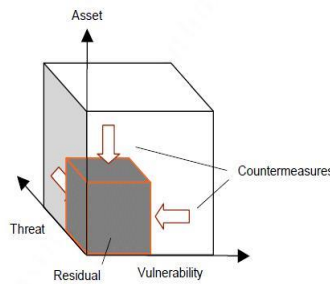


Figure 2.5: Risk as a function of asset value, threat and vulnerability

When it comes to the outsourcing phase, risk management refers to the practice of identifying, analyzing, and managing potential hazards that might result in monetary loss or affect operational impacts. In this section, we will explain how security professionals might make use of risk assessment to assist them in doing their jobs:

- i. Make an inventory of the characteristics of the network.
- ii. 2. Make a list of the potential dangers and weak spots.
- iii. 3. Determine the chance that an attack will be launched against the network.
- iv. 4. Determine whether potential security services and procedures may assist in lowering the level of risk posed to the network.
- v. A good security control is built on a number of different enforceable security components.

These components include risk management, information security policies and procedures, standards, guidance, classification of knowledge, online security, and security education. The resources of companies may be safeguarded with the help of these fundamental components. Security reduces the risks caused by threats as shown in figure (2.6).

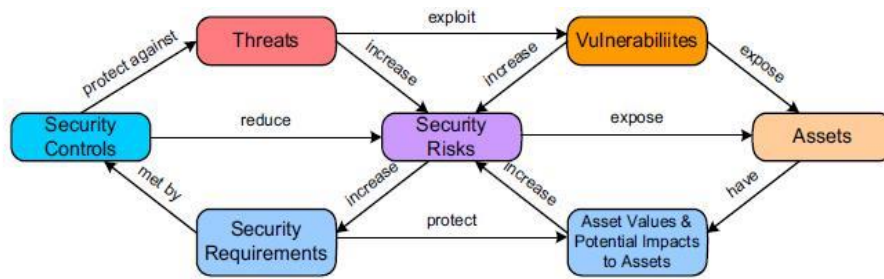


Figure 2.6: Risk Concept Relationships

Risk differs from other project stages by looking for three factors:

- A failure related to an case. This failure is referred to as the danger effect.
- The probability of an occurrence happening.
- Risk management, a series of steps to reduce or minimize risk.

2.6.2 The Procedures of Risk Management

The major components of the risk management method are seen in Figure (2.7). The protection risk assessment strategies of E-Government provide three steps: risk recognition, risk Test and risk regulation. [25] .

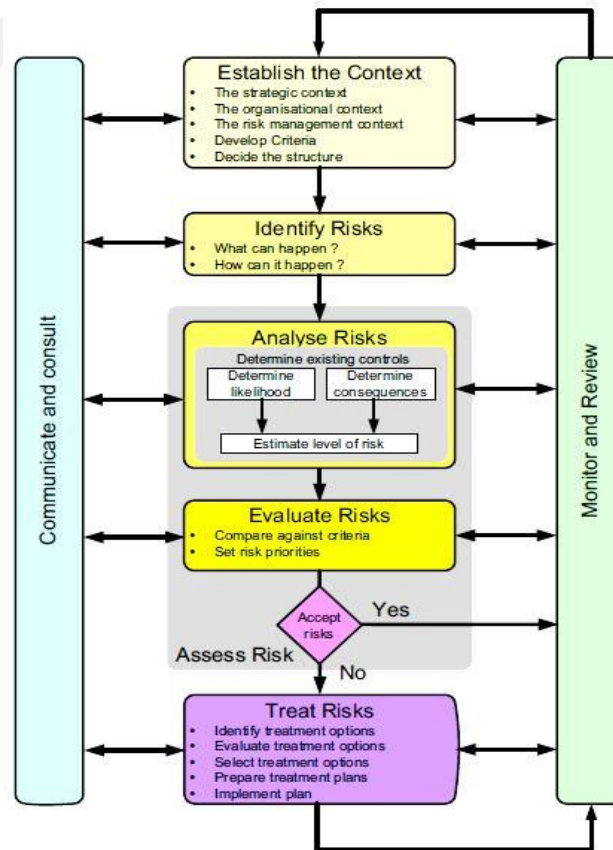


Figure 2.7: Risk management process

A- Identify risks

System risk assessments serve the purpose of ensuring that the required levels of safety are met by the E-Government system. In order to successfully handle the potential safety issues posed by e-government, the first stage in risk management is to identify potential threats. When it comes to risk detection, the first emphasis is on the collection of various particular vulnerabilities, flaws, and associated countermeasures. After that, all probable dangers or potential future challenges to the E-Government network are taken into consideration. The purpose of the risk Test is to discover any dangers that may exist in the configuration of the network, applications, or the exchange of data. The identification of risks and the management of such risks are the tools that are used in order to address or mitigate the impact of threats with unknown outcomes.

B- Risk assessment

The government is providing society with management and resources that are higher in quality and more productive as a result of the success it has had in creating E-Government information systems at different levels [26]. During this same time span, a number of other protection issues have come to light. If we do not take appropriate countermeasures, they will lead to severe economic loss as well as calamities. We cannot afford to let this happen. As a result, it is of the utmost significance to conduct research on the theory and practice of carrying out safety risk assessments in the field of information technology. Conducting a safety risk assessment is the way that will prove to be the most successful in meeting the goals of the security management system. A precise analysis of the dangers faced by an organization's resources may be obtained via the use of policy. They will be able to assess the situation and create a methodical strategy for risk reduction as a result.

The following is a list of the fundamental stages involved in risk management:

- a. Locating and assessing the value of various properties.
- b. Identify weaknesses.
- c. Determine the assaults and the links between them.
- d. Estimated severity of the risk.
- e. Create a cost benefit study.
- f. Lay out the policies and processes for ensuring compliance.

The identification of hazards provides direction for judgments about which risks will need to be handled as well as which risk management solutions will be most suitable and cost-effective. The possibility of the various scenarios is taken into account when determining the level of risk [10]. The study may be qualitative, semi-quantitative, or quantitative, or any combination of these approaches, depending on the specifics. The qualitative, semi-quantitative, and quantitative levels of difficulty and cost are, in increasing order, the levels of complexity and expense of these analyses. On the other hand, common properties are susceptible to distinct dangers. Table 2.1 provides more insight into the connections that exist between assets, vulnerabilities, risks, and threats.

Table 2.1: The relationships of assets, threats, vulnerabilities and risk

Asset	Threat	Weakness	Risk
Hard drive	Kit failure	Mechanical and split	Loss of data ,drive, and productivity
Hard drive	Power	Reliance on constant power for proper operation	Loss of data ,drive, and productivity
Data	User deleting files	Administrative mistake	Loss data or corruption of data
Data	Virus	Missing or out-dated antivirus software	Loss data or corruption of data and possible loss of additional information
Web data	Hacker	Weak or configured software	Company image data corruption, loss of business, loss of goodwill,
Corporate proprietary information	Corporate spy	Weak web access strategy	Loss of competitive edge in market
Servers	Fire	Fire removal system, bad or non-existent.	Harm to large data amounts and potential financial loss

Table 2.1: The relationships of assets, threats, vulnerabilities and risk 'Table Continued'

Servers Database application	Evasion Director Settings change or the setup	Poor safety of facilities Impoverished policy on change Command to transition or shift	Database fraud Information failure or network usage, profitability failure and feature loss
Web-based database	Hacker	Firewall or internet security, weak or non- existent	Confidential details, such as credit card numbers or personal knowledge, may be accessed, used or released

C- Risk Controlling

The selection and implementation of appropriate risk mitigation strategies are the two main components of risk management, which aims to bring the amount of risk down to an acceptable level. The process of controlling risks is an essential component of risk management. E-Government protection risk management's primary objective is to reduce the level of threat posed by efforts related to E-Government operations. There are three different ways that one might increase their exposure [26]:

- i. minimizing exposure to danger by modifying the safety standards or any other aspect of the apparatus.
- ii. Move the risk elsewhere by transferring it to other processes, people, organizations, or assets.
- iii. Considering the risk, admitting that it exists, controlling it using the resources that are available, and making a plan to recover from the loss if it does occur.

2.7 SECURITY OF DATA

It has come to light that information privacy is a significant concern in the realm of e-government, particularly in some organizations where data storage is essential to maintaining national security. For instance, one of the managers made a mental note of this after hearing it from a few different respondents.

This cityment demonstrates that worries over data security are a factor that limits the organization's ability to utilize E-Government.

In some companies, senior managers truly do not have decision-making capabilities with regard to E-Government since it was a top management role that was frequently perceived as a barrier to application. This is because data protection addressed important concerns or the personal privacy of consumers. [27]:

- The manager observed that existing E-Government programs are so much safer that every time a file is viewed, it is watched and logged by the individual user.
- Some respondents, however, had the contrary position and considered that the E-Government could better help and enhance data security. As a consequence of this, the most recent technology was used in order to generate a more exhaustive audit trail that details each time a file has been read as well as for which user.

A number of administrators have brought up the possibility that some organizations have published guidelines in order to protect the privacy of information as a result of the implementation of e-government. One of the research papers on these rules contained a section that focused on employees working in the information technology sector. The protection of the department will be evaluated once every two years. In point of fact, employees of other firms were forbidden from using their own smart phones or memory sticks while they were on the clock at their respective organizations. In addition to this, the system's USB ports were deactivated, thus users were unable to make use of them. In this scenario, the more strict protection that was offered by the introduction of the E-Government has had a substantial influence on its adoption by workers. Specifically, the adoption rate has increased significantly.

In a nutshell, the organization's preparedness to adopt E-Government has been significantly impacted by each of the three sub-themes, which are technology, money, and defense, as described in the previous section. It was noticed that there was an overall environment in the workplace that was centered on aversion to change or dread of the implications of changes, which suggests that this influence may have had a negative impact. After all, this was regarded as a result of a larger willingness to embrace e-government if the impact was positive, and it was expected that this would be the case. Because of this, the investigation demonstrated that the creation of E-Government organizations required a reliable network, an affordable budget, and effective protection mechanisms. [28] . Because of this, all three issues have had an effect on the organizational training that has been conducted about the e-government alternative.

3. METHODOLOGY AND DESIGN

3.1 INTRODUCTION

The purpose of this chapter is to provide an explanation of the research and development methodology that was used to evaluate users' perceptions about public e-services in Iraq and to assess their perception of e-services barriers and to determine the links between e-services assessment and barriers assessment by suppliers on the one hand and the actual city of the art in e-service [29]. [29]

The extent to which people are able to hold their leaders accountable in a democracy is shown by the level of political unrest that prevailed in the Middle East in 2011. Iraq is considered to be a developing nation since the majority of its population get their services from government offices that are open during the same hours as schools and private businesses. In the event that any individuals need to finish their paperwork, they are need to be excused from their occupations, and often, they are had to squander a very lengthy amount of time waiting in queues while attempting to accomplish their work. E-government works toward the elimination of inefficient government operations, public unhappiness, and the waste of energy, resources, and financial resources. Citizens are able to complete their responsibilities whenever and whenever they like, 24 hours a day, 365 days a year, with only a few mouse clicks [16]. Because of this, electronic government is not a luxury but a necessity in the context of Iraq. However, given that the majority of Iraqis have little experience with the internet, it is more important to develop citizen-centered websites that encourage greater adoption and build more positive attitudes toward secure electronic government. Because of the many challenges and issues that are connected to the development of e-government in Iraq, such as people's lack of trust in e-government and fear of the loss of personal data, e-government in Iraq has not been successful in accomplishing its goals. To briefly summarize, the People's aspect faces problems with political and civil unrest, as well as a shortage of skilled professionals to create security systems. Regarding the mechanism facet, there is a lack of a legislative framework that is consistent with the objectives of the E-Government project, such as the centralization of ministries and other government agencies. E-Government is an effort that aims to modernize and streamline government operations. The E-Government technique has been influenced by political choices, one example being the fact that

many manual resources have not been moved to the E-Government method since doing so requires political considerations. On the other hand, Iraq's network also has to be improved, with internet access and power supply being the two most important aspects of this project. Because of poor resource planning and widespread corruption in Iraq, the development of the project is slowed down, and the people working on the project are unhappy as a result. The use of electronic government services in Iraq may result in significant productivity gains.

When a significant amount of contact and related expenses within government entities were avoided, such savings may be reflected in government departments. Additionally, a general increase in the facilities given to people, including residents, corporations, and other government organizations, may also contribute to such savings. People are more worried about "how long" than about "how good," therefore the ability to save time is a huge benefit. On the individual level, the time tool is crucial because people are more concerned about "how long" than about "how good." Another benefit is the accessibility of search engines, which encourages the accumulation of information. In addition, since e-services are a primary focus, Iraq may play a significant part in the process that leads to the country becoming a worldwide trade agency. In addition to this, it helps to make the government more open and transparent.

3.2 STEPS FOR BUILDING SECURITY E-GOVERNMENT SYSTEM

Flowcharts are organized in a certain way to display the steps involved in the intended approach and to depict the different stages of the task. The flow chart illustrating the technique sequences may be seen in Figure (3.1). The process began by determining the area of interest, and then it proceeded to conduct an exhaustive literature study of the region that was determined to be of interest. The gathered information from the survey and questionnaire will determine the problem statement, the objective of the work, as well as the scope of the task. Processing and analysis of the data will take place. The implementation of the new system will include the development of a new system. On the other hand, if the new system can be trusted, then it will continue to function; otherwise, it will need more data collecting in the form of questionnaires and surveys.

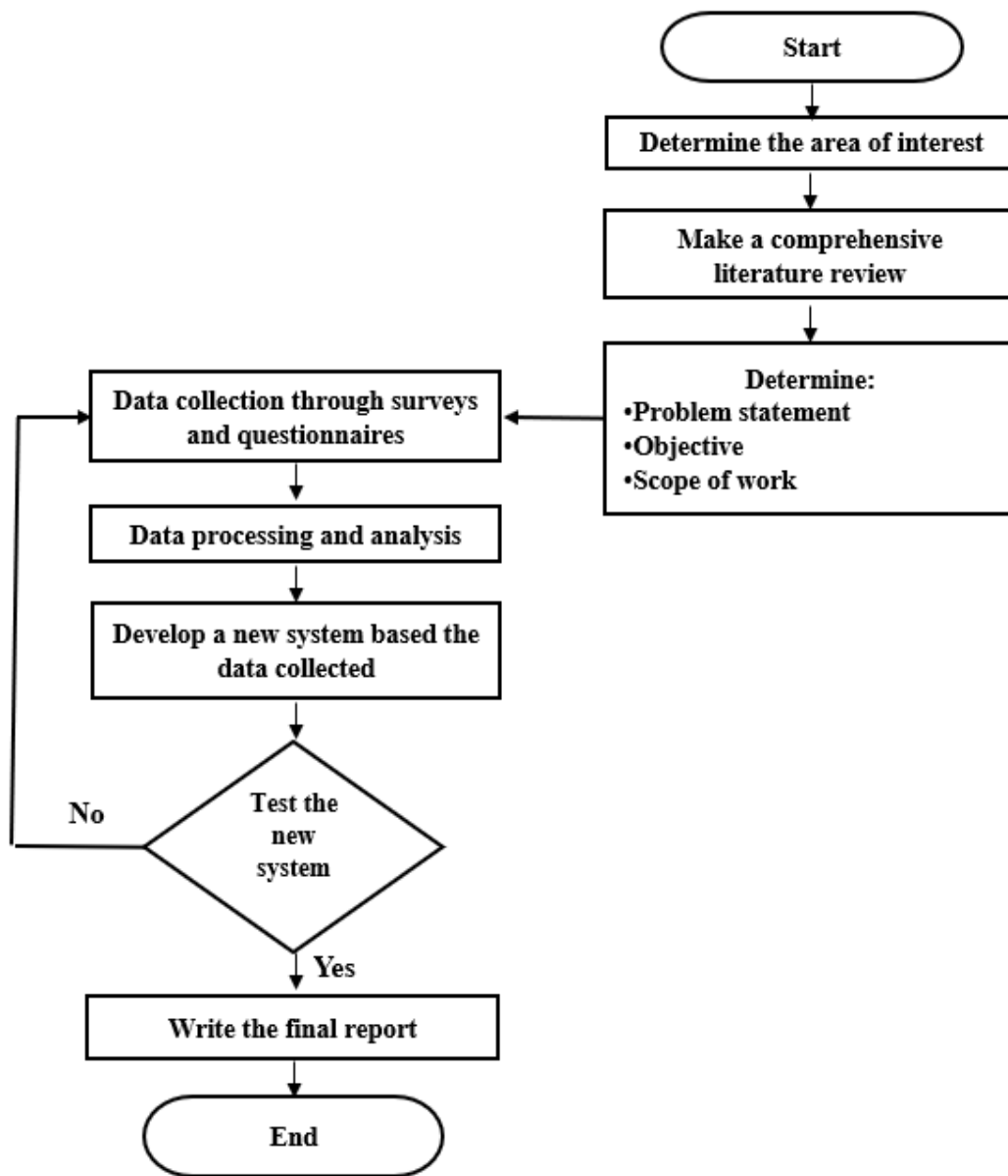


Figure 3.1: The Proposed Methodology

3.3 THE SECURE MODELS

The researcher suggests using the following models in order to ensure the safety of e-government systems. In addition, these models have a few flaws in a variety of different areas, and in addition, they do not support the particular services that are offered by the system. In addition, these models have been used extensively in a variety of academic sorts of study concerning hazards and other types of security systems in the past

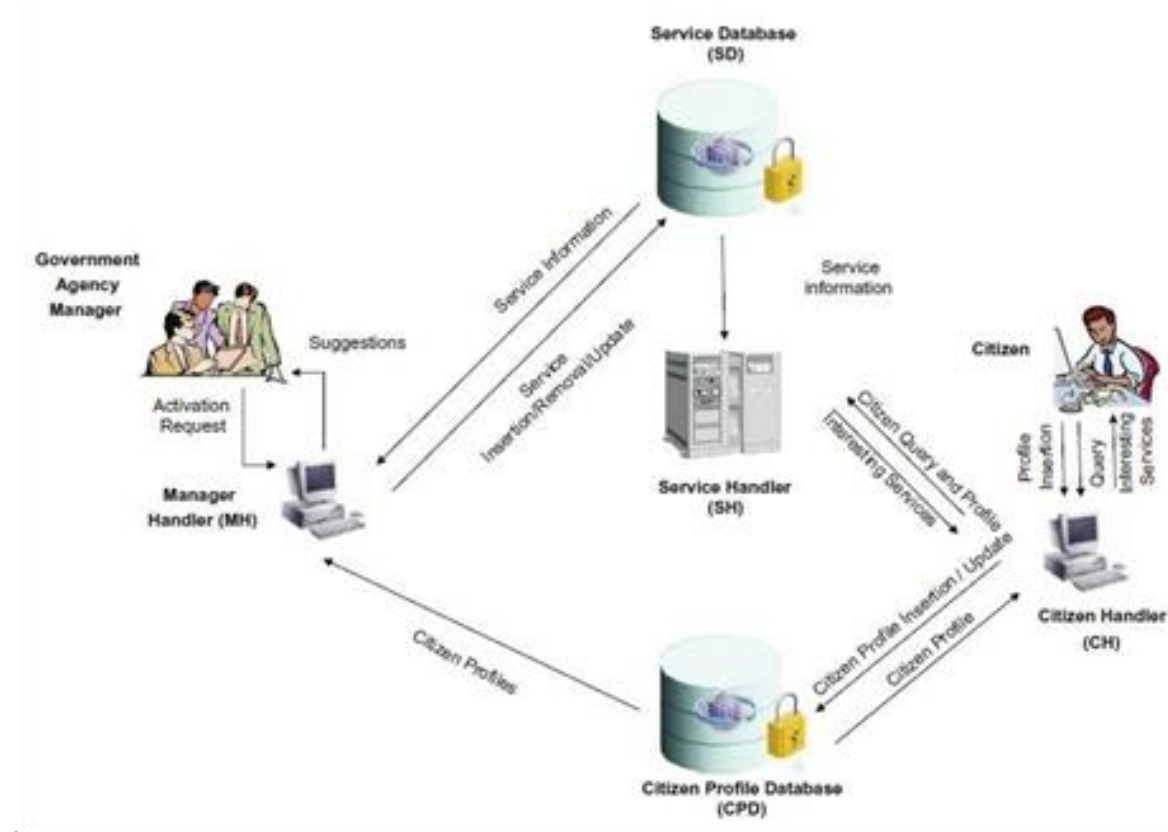


Figure 3.2: The E-Government Model

The model that can be seen in figure (3.2) provides assistance for the governmental services; however, it does not describe the nature of these services or how subjects may apply their demands. In addition, this model did not account for the process of making payments via the use of specialized services that link the system to the banks in the nation, nor did it take into account the hazards that may arise from the presence of hackers or viruses. However, this model can be improved by adding support for payment systems and associating this service with the data registered citizens provide in order to save the personal data and also support the financial operations via the system maintained by the government. Additionally, the process of improving

this model could be expanded to include other operations besides financial ones, the results of which will be made public as further research is conducted. The first proposal was made in a broad sense, and it was displayed in the model in the figure (3.3) to the users or the people. Nevertheless, this should be clarified in the E-ability Government's to tailor certain aspects related with the governmental services that people use it for. These services need to be dispersed in accordance with the needs of the residents, and they will be run on the system manager by

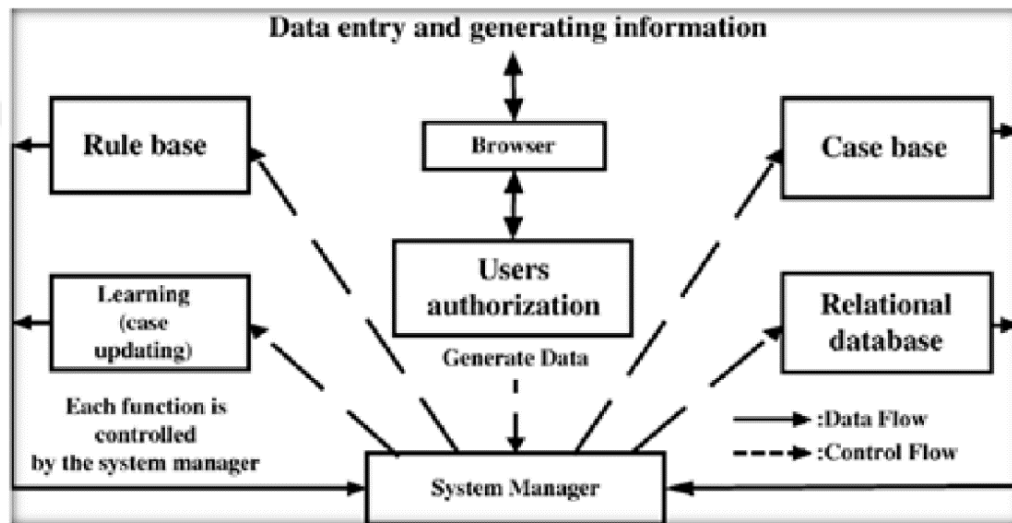


Figure 3.3: The Proposed Security Model

expanding the number of services related to system management. There is a clear flaw in the model-based flowchart shown in figure (3.4) about the manner in which the execution sequence is carried out. Additionally, the Handlin flowchart does not support the security system that will handle user accounts. The nation is served by this electronic government system. Nevertheless, the researcher may improve upon this model by including a payment mechanism and linking that service with the database management system. Additionally, it is possible to make credit cards for each citizen who has registered with the government in order to save their personal data and also to support the financial operations carried out through the al system. In addition, the improvement process could be expanded to include additional financial operations.

The model shown in figure (3.3) did not, in general, identify the kinds of services that were represented to the users or the residents. The payment procedures that should be cleared in the E-Government system were not, however, indicated by this model. Therefore, the researcher needs to improve this model by tailoring certain characteristics to specific facets of governmental

services. The provision of these services must take into account the needs posed by the populace. In addition, the improvement will be implemented on the system manager by expanding the functions that system managers play in order to assist governmental services.

Building a robust database that includes information on all residents, operations, services, and financial processes is one way that this model may be improved, and it is thus feasible to do so. The "collection of online pages" has to be improved by adding fresh information about the web services provided by the E-Government system, and it also needs to be supplied with an electronic financial system so that citizens may carry out payment operations in a private manner. On the other hand, the researcher was unable to locate any earlier models about the Test and design phases that took into account the subjects' actions and other factors; so, the researcher will also include more helpful upgrade concerning this matter as well. The model shown in figure (3.3) did not, in general, identify the kinds of services that were represented to the users or the residents. The payment procedures that should be cleared in the E-Government system were not, however, indicated by this model. Therefore, the researcher needs to improve this model by tailoring certain characteristics to specific facets of governmental services. The provision of these services must take into account the needs posed by the populace. In addition, the improvement will be implemented on the system manager by expanding the functions that system managers play in order to assist governmental services.

In the model-based flowchart shown in figure (3.4), there is a clear flaw in the manner in which the execution sequence is managed, as well as in the way the database of the system is dealt with. On the other hand, this flowchart does not offer a security system for user accounts; more specifically, it does not explain how the system would handle user accounts. This means that the security of user accounts cannot be guaranteed by this flowchart. This concept is simplistic and lacks the depth necessary to depict a workable electronic government system.

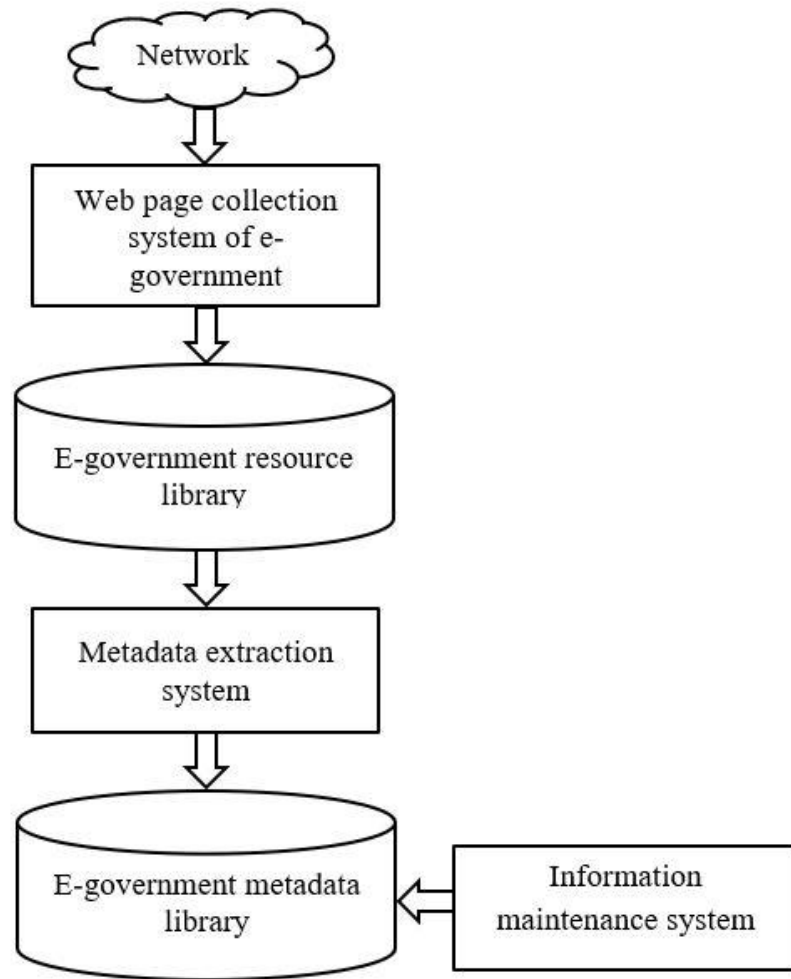


Figure 3.4: Flowchart of E-Government Source

This model may be enhanced in a number of ways, one of which is by constructing a comprehensive database that has information on all inhabitants, operations, services, and financial processes. As a result, it is possible to implement this improvement. The "collection of online pages" needs to be improved by the addition of up-to-date information regarding the web services that are provided by the E-Government system. Additionally, it needs to be supplied with an electronic financial system so that citizens can carry out payment operations in a private manner. On the other hand, the researcher was unable to uncover any previous models about the Test and design stages that took into consideration the activities of the people as well as other elements; so, the researcher will also incorporate more useful improvements concerning this topic as well as well.

3.4 CREATE AND EVALUATE THE BRAND-NEW SECURITY MODEL.

As was said earlier, the focus of the questionnaire will be on the technical aspects that truly make a big difference in terms of how satisfied customers are with both the level of security provided and the potential dangers that may arise. The participation of the community in the process of making improvements will be made possible as a result of this. Therefore, the new model will focus primarily on the gratification of the residents and will assist in the elimination of any barrier that constitutes a genuine issue or that prevents and hinders the citizens from making use of the E-Government services [30]. On the other hand, this brand-new model will use the Turkish experience as a point of comparison in the process of making improvements to the figure (3.5). In order to guarantee that the new system accurately represents and is directly connected with the goals, it will need to be scrutinized and examined in a variety of different ways. Users are allowed to make covert requests for official services as well as other types of services via the testing of a new system. In addition to this, it is anticipated that the new system will be both useful and covert in order to provide convenience for its customers.

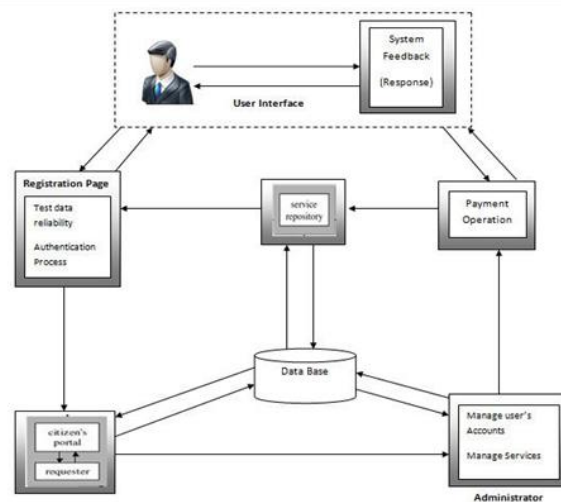


Figure 3.5: The Simple User Interface

When citizens utilize the electronic government system, they feel more at ease if they believe that the system is safe and intelligent enough to provide them with the services they need. The construction of the system in an intelligent manner is what is required to win this case. However, the developers of the system are the ones who are accountable for constructing Structure with all of the essential materials, and it is their job to organize the pages in accordance with the services. That is to say, according to the purpose of the Framework of E-Government system, each

division shall provide equivalent services categorized under distinct names. On the other hand, security is seen as a significant issue that is vital for users since consumers are concerned about the safety of their own personal information. Therefore, in order to service it in a secure manner, the E-Government system has to provide a large database that is password protected [30].

The E-Government system often receives a great deal of attention from a large number of consumers, and it may seem to be the government's virtual system that can service a very large number of people all at once. E-Government should support services that are crucial for people and their corresponding must be quick and accurate in order to obtain customer loyalty in order to achieve excellent performance. This would help E-Government achieve good performance. The following flowchart provides an illustration of the steps that occur when a user enters the E-Government system. These stages are determined by the user's actions as well as their perceptions of the system services.

E-government should support services that meet the criteria and needs of citizens, as demonstrated in the flowchart in figure (3.6), which may be found here. The citizen services must be distributed by the system in accordance with their titles. This means that the developers of the system must organize page services in a way that is both intelligent and user-friendly. One way to do this is to arrange groups of services under a title that indicates the content. On the other hand, when a citizen chooses to establish an account in the system, it is required for the database to be strong and secret in order to provide a secure environment when a citizen uses the E-Government system. This is because the citizen will have access to the information in the database.

It is necessary for individuals to respond to the questionnaire on their thoughts regarding the layout and functions of the E-Government system in order for the model to be successful. Questions on the system services and user interface take up the majority of the space in the questionnaire. The transmission of data from one stage of the model to the next is contingent on the results of a questionnaire administered to citizens to determine the degree to which they are satisfied with the E-Government system's individual contents and services.

The findings of the questionnaire should provide a percentage representing citizens' perceptions of each aspect of the e-government system. Therefore, the success of the model is dependent on the percentage of responses to the questionnaire. The usefulness of the system facts, which is dependent on the structure of the system pages, has an effect on the behavior of citizens when

using the system. As a consequence of this, the model of the electronic government system will be dependent on the actions of citizens toward the system. However, in order for the developers to arrive at a conclusion on how to design and construct the system, they need to take into consideration the answers of the questionnaire. In addition to that, the developers are required to install an online questionnaire on each page of the E-Government system. The participation of the populace in the process of development will result in an improvement in the overall functioning of the system.

Citizen is main element in E-Government system, and it is important to satisfy citizen about data security in the system. So, system database must be strong and secret to store the personal data of users such as, profile data and their arguments details. It is suitable if developers build the system database on special server with strong properties to make queries fast and accurate via the system. Registration process is related to the database directly, and it is necessary to simple the registration steps such as focusing on the main required data.

Furthermore, developers are responsible for building the secure E-Government system according to Three tier method which can isolate each part of the system from others. This way can increase the security over the system because this way enables developer and programmer to build each part alone and then connect the three parts together in a secret way which makes the system strong and it is difficult to be hacked from anyone. Besides that, any risk that happens on the system will not affect all the system contents, but it may affect one part only because three tier method isolates the system parts in individual parts.

3.5 DEVELOPING A NEW SECURITY SYSTEM PAGES

This methodology is used by developers to improve control over the database and over the program. This method is based on splitting the website into three sections: database tier, application tier and intermediate tier. The database tier is considered to be the main part of the system that contains all the system data. On the other side, the application tier is a client or standard user interface and this tier is important as it allows users to navigate the website. The relation here between database as well as the application tiers is rendered through the intermediate tier, which allows the transition of data from / to a database from / to the application

tier and vice versa. Using three-tier method allows the designer to program each part individually from the other parts. This technique protects the website from other threats so that the other sections should not be impacted in any way. Using the three-tier approach on the E-Government platform is important to preserve very significant volumes of data on this network from any manipulation that may result in data loss. However, the three-tier approach is used in other websites , especially broad websites such as our E-Government program.

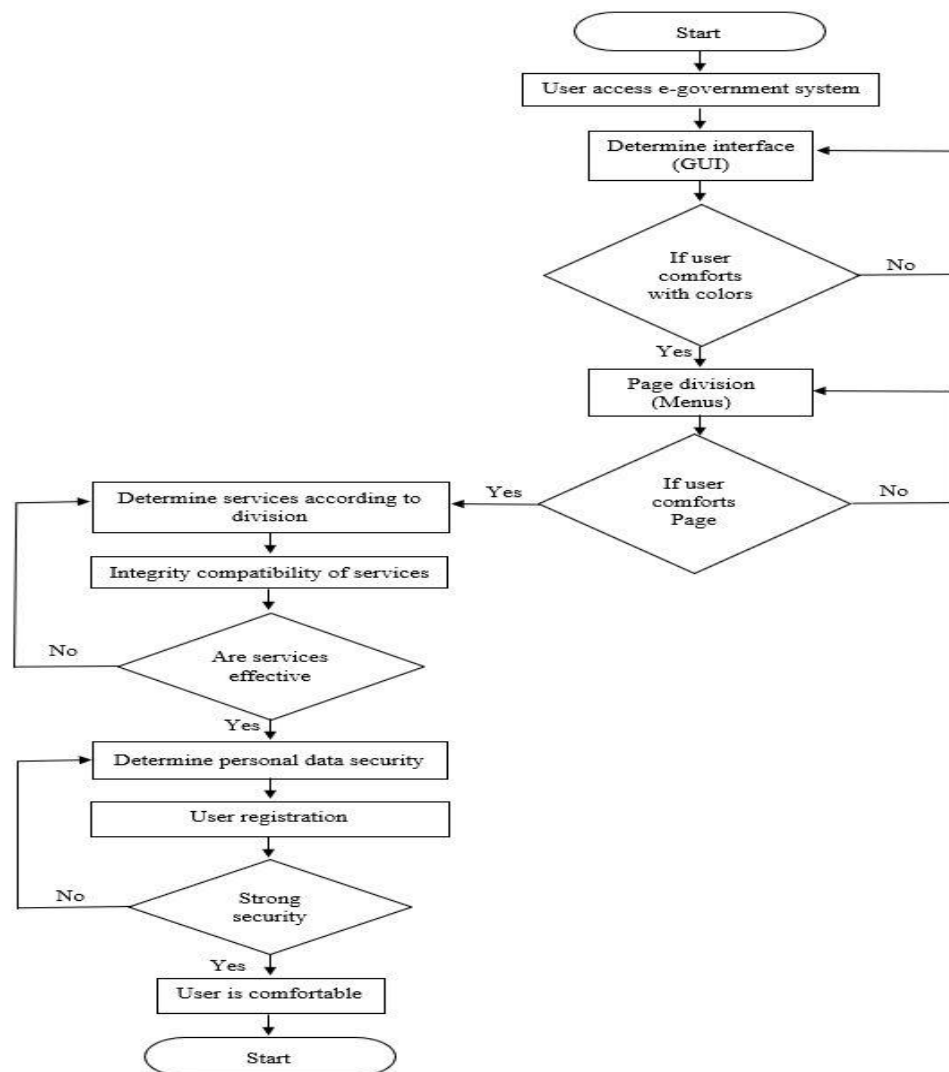


Figure 3.6: Citizen Behavior towards using e-Government System

3.6 RESEARCH METHODOLOGY

On the basis of the characteristics of their respective websites, the electronic government systems of Iraq and Turkey are contrasted. The researcher analyzes each system from the perspective of its user interface, level of security, range of services, and general performance. According to the comparative sides, the researcher found that the website for the Turkish government system is better developed than the website for the Iraqi e-government. It should also be mentioned that the substance of the Turkish Government is quite dynamic. On the other hand, the content of the Iraqi E-Government system is mostly static, and it requires further upgrades on both its pages and its operations.

As was just discussed, the E-Government system caters to various demographics of individuals in order to ensure that it provides enough services to the general populace. How to incorporate the actual end-users and improve the way data and information are gathered so that they may dramatically alter the user interface of the E-Government application in Iraq based on the experience that Turkey has had in this area. It was addressed how an e-government should be designed and built such that it provides people with an enjoyable experience whenever they engage with it. The responses to a questionnaire, which dictates how the methodology should be carried out, are one of the factors that influence our approach. In addition to this, the technique seeks to improve the E-Government system in a way that satisfies the user while they are using the system, which is especially important given that our system is the website. The E-Government website is visited by a large number of users all at once, which may have an impact on the system's performance; our technique takes into consideration the traffic that is currently being experienced by the system. As a result, the methodology is centered on the improvement of the E-Government system. This is accomplished by focusing on the differences between the Iraqi and Turkish systems, with the goal of utilizing the Turkish system as a model for the Iraqi system. Following this, the Models, Database, Interface strategy, and Services are developed. All of these factors have an effect on how users interact with Iraq's electronic government system. Therefore, it is essential to emphasize these components and the ways in which it may be enhanced.

3.7 THE PERSONAL EXPERIENCES SURVEY AND STUDIES ANALYSIS TOOLS

P.E.S.T. Test is a method that is used by businesses to determine the aspects that potentially effect project delivery. These components include Politics, Economics, Social Sciences, and Technology (P.E.S.T.LE Test 2013). (P.E.S.T., 2013). Since 2003, Iraq has gone through a variety of changes in its political landscape, educational system, technology landscape, social landscape, and cultural landscape. In addition, there is no consistent scenario from north to south due to the fact that the same economic, social, cultural, and technical concerns are impacting each province. In addition, in order for Bagdad to be able to execute a project such as an E-Government, it is necessary for Bagdad to collaborate with the other governments in order to acquire complete readiness to carry out work on a project. In order to achieve this goal, the local administration of the city should conduct a research to determine all of the aspects that might determine whether the project is a success or a failure. In order to have a better grasp of the existing situation in the city and the elements that might potentially have an impact on its integration, taking the P.E.S.T. Test would be a good place to start.

As a consequence of the data test, the government is aware of concerns that have the potential to either make the project more difficult to complete or prevent it from being completed at all. According to the article titled "P.E.S.T. Test: Identifying Opportunities," the P.E.S.T. test includes a number of different forms, some of which involve aspects in addition to political, commercial, social, and technical considerations.

- a. P.E.S.T.L.E.: Political, Economic, Sociological, Technological, Legal, Environmental.
- b. P.E.S.T.L.I.E.D. is an acronym that stands for political, economic, social, technological, legal, international, environmental, and demographic factors.
- c. STEEPLE, which stands for social/demographic, technological, economic, environmental, political, legal, and ethical considerations
- d. S.L.E.P.T.: Social, Legal, Economic, Political, Technological.
- e. L.O.N.G. P.E.S.T.LE. refers to both the local and national and worldwide forms of P.E.S.T.LE.

3.7.1 A Aspect Of Being Politically Aware

This aspect that affects someone is social risk, so governments may expand their flexibility and push it to improve their systems in a variety of areas. Each city in Iraq will make an effort to differentiate itself from the others and improve its infrastructure. It would seem that these districts would turn back to the central authority in Baghdad in order to get help. Are some of the political challenges that the city could need to overcome. [29]:

- i. Because Iraq is not a peaceful country overall, its many different political factions are often in a state of high tension with one another. The struggle against jihadists, such as those affiliated with Isil, is now being waged. The progression of the government would be slowed down by the fact that the parties are competing violently with one another. In order to do this, the local government will submit the necessary paperwork to the new administration in order to get the necessary permissions before beginning the actual process of enforcing it.
- ii. Provide extra protection to the structures, with special attention paid to all of those who manage and function for the developer. As a result, the Council will provide a safe environment for all areas and intensify terrorist threats, which have the potential to destabilize all existing power structures and institutions from the ground up. They should also establish a guideline for themselves.
- iii. The issue of corruption is one that, under the current circumstances, cannot be resolved to anyone's satisfaction. The leadership will shift such that support for the initiative is discontinued. The conflict that exists between both parties would not only impede progress but also halt the process.
- iv. A political fact may be tied to the development mechanism via the selection of persons based not only on their skills in the area of information and communication technology, but also on their political opinions.

- v. When e-government is implemented, it seems as if all nations, with the exception of Iraq, are operating independently. They were safe from any violence or dangers posed by militants thanks to the protection provided by their government. Therefore, imitating their strategies would not be a prudent course of action to take.

3.7.2 Economic Factor

According to the World Bank's report titled "Iraq Outlook," the Iraqi savings system is in a state of disarray due to a number of factors. These factors include the drop in oil prices that occurred after 2015 and the continued existence of ISIS. Baghdad might run into financial difficulties for this reason as well as because of the current situation. The Iraqi government is now engaged in a conflict with ISIS and is working to reduce or eliminate the group's presence in the area. In point of fact, there are other difficulties that may be uncovered, such as the ones listed below:

- i. Greater divergence: the failure of the E-Government initiative may be traced back to corruption as a result of the high costs of internet connection and personal computer ownership.
- ii. The government intends to stimulate the economy by increasing the number of jobs available and the earnings paid to employees.
- iii. A large number of people leave the nation in search of employment because of a lack of available skills, which also contributes to low earnings. In addition, the staff that is available suffers from a lack of expertise and has to be trained.
- iv. The objective of implementing an electronic government is not one of the administration's priorities.
- v. Misuse of the software by generating erroneous or otherwise problematic agreements that have the potential to bring the whole project to its knees.

- vi. insufficient preparation on the part of the business sector to make investments in the nation as a result of security concerns and fraud.

A significant portion of the province's infrastructure has been compromised. Because the various factions in Iraq cannot come to an agreement on how to address the nation's ongoing dilemma, the economy of the country is suffering as a direct result of these conflicts. Some of their recommendations also resulted in additional problems, such as a reduction in the earnings of employees whose production was lowered as a result of the plan. After the continuous drop in the price of oil, this is obviously the incorrect decision to make from a financial standpoint, therefore don't do it. One of the many chances that might assist with the expansion of the company is in the field of tourism. Iraq is home to a number of Muslim holy sites. In addition, there are several other ancient cities in Iraq, such as Babylon and Ur, in addition to other areas spread across the country's cities. These destinations will bring in a sizable number of tourists, which will facilitate the nation's recovery from the crisis. However, at first the Iraqi government would make it easier for visitors to visit the country by providing a more safe environment.

Because of the knowledge and commitment of their leaders, a number of different countries have been able to circumvent a significant number of the challenges they have encountered via study. For instance, South Korea overcame the economic crisis of 1997 by focusing its growth efforts on the information and communications technology business. In addition to this, the members of the United Arab Emirates, as well as their plans and schedules, did not depend on oil. Instead, they looked at other ways that the economy of the country might be improved. The United Arab Emirates now holds the top spot on the Tourist Index.

3.7.3 Social measure:

The only elements (policy and economics) that have a favorable influence on activity in Iraq, especially in the southern cities, are those that were stated in the preceding considerations. Any of the aforementioned socioeconomic problems [31]:

- i. Education: Iraq held the top spot on the list of countries in the Middle East with the greatest education system until the year 2003. Teaching that was not only open and

inclusive to all faiths but also encouraged women's access to education was also provided. The percentage of people who have completed some kind of formal education increased from 52% in 1977 to 80% in 1987. Since 2003, the number of people with jobs has decreased as a direct result of terrorist threats, kidnappings, low rates of education, and high expenses of living. Apparently, in accordance with the United Nations. Between the years 2003 and 2008, the United Nations High Commissioner for Refugees (UNHCR) was responsible for 31,598 assaults on Iraqi academic groups, and assassination squads were responsible for the deaths of 259 academic professors. Because of this factor, the percentage of illiterate people in Iraq grew.

- ii. Conflict with regard to change: among the officials of the administration, some of them were against moving to the new world because they believed that it presented a challenge to them and had the potential to cause them to lose their job and their power. There have been others who have resisted, and a project like this one may put a stop to corruption. People's lack of confidence may be one of the factors that keeps them from participating in this endeavor.
- iii. Need: The inability of certain people to acquire a gadget or pay the cost of an Internet subscription might be a cause for worry since it can make it difficult for them to eat.
- iv. Energy is one of the most significant challenges facing the planet today, especially in the southern regions. People desire to put more money into the generation of electricity, despite the challenges of everyday living and the limited availability of resources. They cost the government a lot of money for a few hours, they cost the owners of personal generators money for a few hours, and they cost petrol money since everyone has their own private generators.
- v. Cracked, especially in more rural places.
- vi. Competence in information and communications technology: the city core of Baghdad has a significantly greater amount of touch with technology. There is no information

available on the number of people in the area who have experience in I.C.T.; nonetheless, based on certain characteristics, the level may be estimated. This does not account for a particularly big proportion of everything. There are also secluded areas inside the city in which individuals are not often very interested in the use of technology.

The political and social issues that Iraq is currently facing make it difficult to carry out certain studies that are vital to the expansion of the information and communications technology sector. However, the City committee will focus on increasing people's awareness of these issues, boosting the level of e-literacy in the population, and enhancing the capabilities of ICT workers. They could even try to get assistance from organizations such as the United Cities. It would provide support and assistance to states such as Iraq.

3.7.4 Technology: A Considerable Aspect

The majority of the research findings that have previously been discussed have begun the process of developing their information and communications technology (ICT) infrastructure before the E-Government project has been processed. Because of all of the damage that has been done to Iraq's infrastructure since 2003 and because of all of the challenges that Iraq is experiencing economically, it is difficult to establish a solid infrastructure, especially in the I.C.T. sector. Baghdad is one of the cities that is working to modernize its administrative structure and its physical infrastructure by integrating information and communications technology (ICT) into daily life and moving to an online framework. Despite this, the city continues to be plagued by a wide array of issues, including the following:

- i. The ineffectiveness of the ICT's underlying infrastructure
- ii. The high expense of using the internet and purchasing a computer.
- iii. There is a lack of energy, person.
- iv. A general lack of expertise among IT staff members.

It is recommended that Baghdad go on with the phase that progressed to implement the E-Government. The first thing that was required to be done was to investigate whether or not the nation and its people were prepared for the proposed endeavor. Baghdad will carry out one of the tests in order to discover methods to strengthen the information and communications technology

area and efficiently carry out the E-Government program. Although it may take some time to complete, the project will result in improved infrastructure, more awareness, and continued forward movement.

3.8 REMARKS IN CONCLUSION

The purpose of this chapter is to provide an explanation of the methodologies that were afterwards used in the process of analyzing the different people's opinions. There are many different frameworks that have been explained, all of which aim to build a powerful E-Government that is only capable of managing people. These frameworks bring concepts from other countries or regimes in order to build an E-Government that is credible and has the ability to protect the data of users against any kind of difficulty or emergency.

4.RESEARCH TEST AND RESULT

In this chapter, the Political, Economic, Social, and Technological (P.E.S.T. Model) [32] Test a management system is used. This system allows firms to assess significant external aspects that impact their company in order to become more competitive in the market. These four domains are crucial to this concept, as discussed in Chapter 3. The ultimate check for digital internet governance.

4.1 ANALYSIS TOOLS FOR ONLINE-BASED SURVEY

4.1.1 Google Forms as Online Questionnaires

I performed an unauthorized E-Government questionnaire on content augmentation. It was decided to use online surveys to pose a variety of questions addressing the hazards associated with e-government. These questions will be included below. The poll was conducted in Arabic and consisted of multiple-choice questions. The information that was gathered via the use of questionnaires was classified as qualitative data since each question was designed to elicit the opinions and points of view of informants on a wide range of research issues. The findings also present fascinating suggestions for E-Government, as well as how the participants perceive it based on their reactions and points of view.

The online poll was issued to interested persons in different roles. All responses from the survey questionnaire were acquired using an online survey, which was done using Google forms. And, in order to repair the data and allow additional processing of the data, their raw data was exported from the system. According to the objectives of this research, the responses from the respondents are organized into a variety of categories, as well as concerns and sub-issues. The results are presented in the form of useful tables and may be broken down into four distinct sections.

4.1.2 Application of SPSS Statistical Software as Analytical Tools

In order to make the statistical analysis more manageable, all of the information that was obtained was transcribed into an Excel spreadsheet. After that, the data were looked at further by using the SPSS approach. The data was analyzed by using straightforward and accurate

quantitative and statistical techniques, including tabulation size, ratio, arithmetic, and standard deviations, all of which are possible via the use of the SPSS program. The SPSS program was used to do an analysis on the link that exists between the various variables and components. The data were computed using several methods, including graphs, tables, statistical analysis, straightforward mathematical calculations, and deductive reasoning. The research objectives and the questions that were asked in the course of the investigation were taken into consideration when doing the analysis.

In order to develop an electronic government that is secure, a factor analysis was carried out by making use of the variables that were included within the questionnaire. The purpose of this analysis was to illustrate the degree of connection that existed between the various variables. A correlation matrix is what SPSS refers to as a collection of the correlation coefficients among the variables in a study.

For further data processing, the statistical software package SPSS was used; condensed and paired samples were utilized for statistical analysis. In most instances, the paired sample tests consist of an excellent pair of data factors that are shared by the samples. When the test findings have a statistical model, performance and quality, and when two measures vary considerably from one another, it is used the majority of the time.

4.2 RESPONDENTS' RESPONSES ON OPINIONS AND ATTITUDES FROM ONLINE-BASED SURVEY

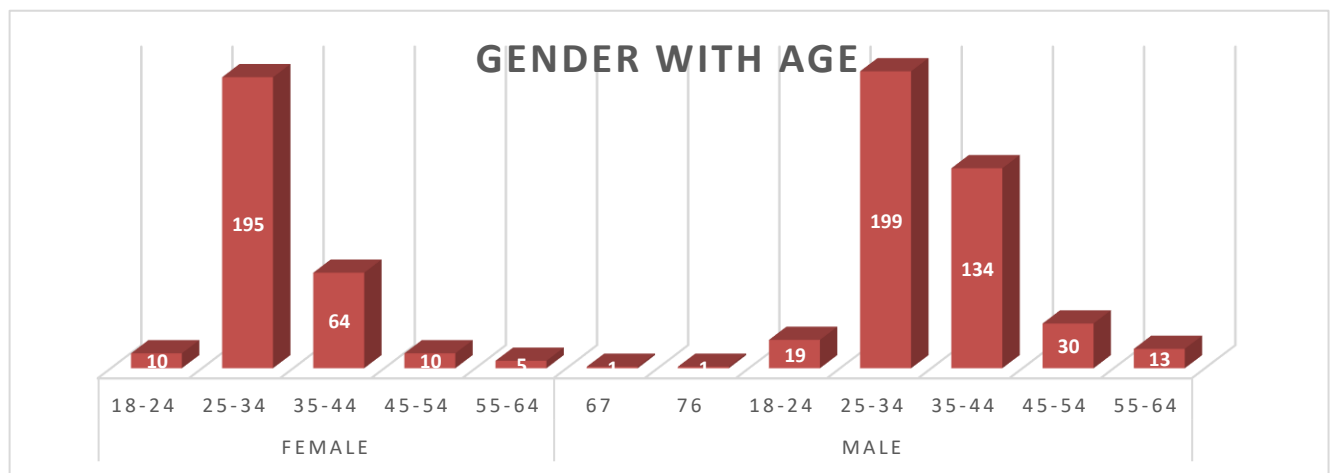
The online questionnaire was responded to by six hundred eighty-one (681) different people. which was offered to different categories (educational background, ages, geographical region, and from both genders) in order to have comprehensive vision into the real citizen's behavior. the research used the SPSS program in order to locate the charts of the questionnaire and the details of the structure.

Table 4.1: Respondents' Characteristics

GENDER OF RESPONDENTS				AGES OF RESPONDENTS			EDUCATION	
No. males	% of males	No. of females	% of females	group	No.	%age	qualification	%qualification
600	58.3	484	41.7	18-24	29	4.3	Mid-School	1
				25-34	594	57.9	Eel. School	1
				35-44	398	29.1	Pre. School	6
				45-54	40	5.92	Diploma	3.2
				55-64	18	2.6	High Diploma	6
				65+	2	1	Bachelor's	42.6
							Master	45.2
							Doctorate	7.5
Respondents' Level Of Internet/Computer Skills								
INTERNET AND COMPUTER SKILLS								
I don't have any information at all	Have enough information	I have a little information	Professional	Using P.C.	Using Smartphones	Using Both	Total Voter	
50	444	567	20	21	377	263	681	

4.3 SAMPLE DESCRIPTION FORM SPSS

The first description for the audience that share their response on the questioner, figure (4.1), shows that the age with the gender that take the questioner and find that the age between (25-34) are the most voter in both gender

**Figure 4.1: Audience**

The second deception is for the academic achievement that voting, shown in figure 4.2 below. In this Test shown that the male voting 58.3% and Female 41.7%, and the table 4.2 below shows the result that getting from voting, and the table 4.3 shows that the academic achievement that using questioner.

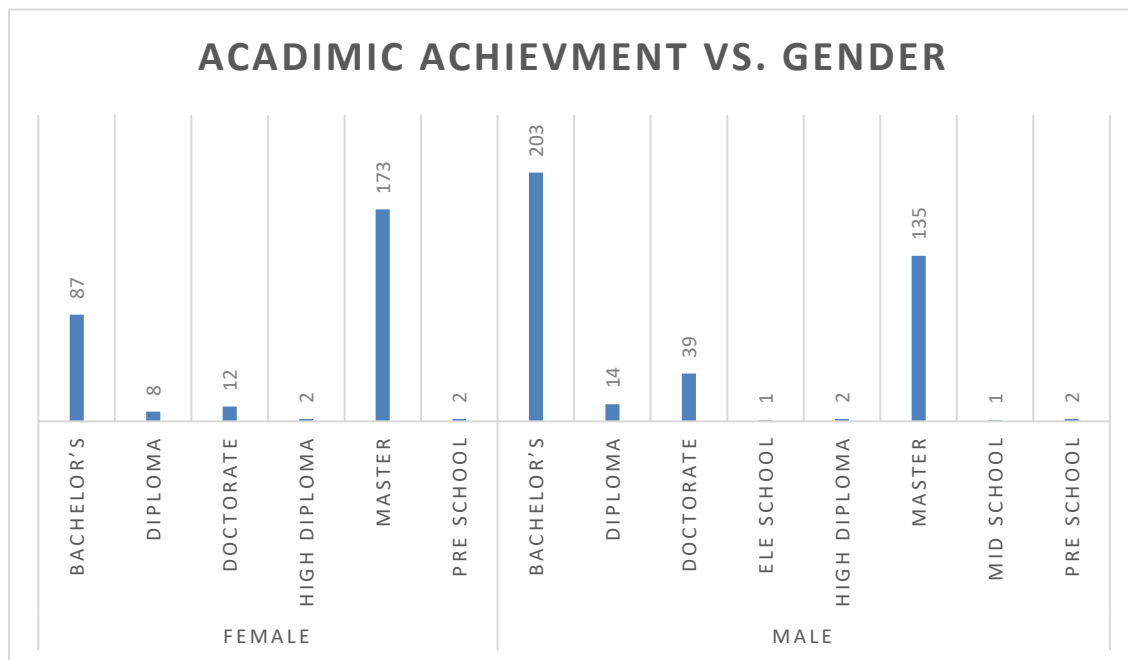


Figure 4.2: Academic Achievement vs Gender

Table 4.2: The Gender voting

Gender Type	Rate	Percentage	Valid Percentage	Cumulative Percentage
Female	484	41.7	41.7	41.7
Male	597	58.3	58.3	100.0
Total	1081	100.0	100.0	

Table 4.3: Academic achievement voting

Academic achievement	Frequency	Ratio	Valid Ratio	Cumulative Ratio
Bachelor's	490	42.6	42.6	42.6
Diploma	122	3.2	3.2	45.8
Doctorate	51	7.5	7.5	53.3
Elementary School	1	1	1	53.5
High Diploma	4	6	6	54.0
Master	408	45.2	45.2	99.3
Middle School	1	1	1	99.4
Pre School	4	6	6	100.0
Total	1081	100.0	100.0	

The third part that used to know how they use the internet frequently and what is the devices used to use daily and what is the type of internet used to surf the net, all that shown in figure 4.3 and the description in table 4.4.,4.5 shows below

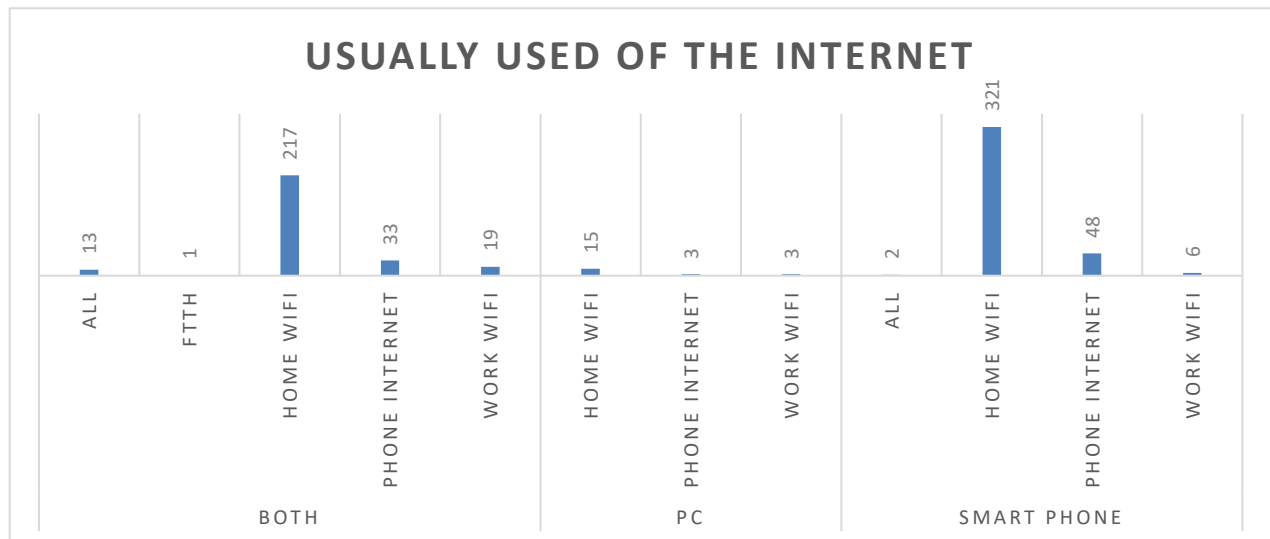


Figure 4. 3: the used of internet and the type of it

Table 4.4: The most Device used to surf the net

The most Device used to surf the net	Frequency	Percent	Valid Percent	Cumulative Percent
Both	483	41.6	41.6	41.6
PC	21	3.1	3.1	44.6
Smart Phone	577	55.4	55.4	100.0
Total	1081	100.0	100.0	

Table 4.5: The communication with the Internet Types

The communication with the Internet Types	Valid					
	All	FTTH	Home WIFI	Phone Internet	Work WIFI	Total
Frequency	15	1	953	84	28	681
Percent	2.2	.1	81.2	12.3	4.1	100.0
Valid Percent	2.2	.1	81.2	12.3	4.1	100.0
Cumulative Percent	2.2	2.3	83.6	95.9	100.0	

4.4 TOWARD E-GOVERNMENT

Tests whose form questioners were gathered using Google forms, and whose results were analyzed using SPSS, may be divided into four categories. Depending on the P.S.E.T analysis approach, our goal is to locate the greatest value; however, before we can do so, we need to locate the traits and information that are most often gathered.

4.4.1 Attitude Toward E-Government

The attitude of customers toward e-government was evaluated based on four factors that were taken into consideration. The descriptive findings of the E-Government method are represented in Table 4.6 below. This statistical calculation performed in the SPSS program assisted us in locating the proper results, which are shown. The aggregate averages of each question ranged from 4.25 to 4.42, which is considered to be rather high. This indicator suggests that consumers

in Iraq are eager to give the public e-government service they provide a try and are ready to utilize it.

Table 4.6: Description of customer's evaluation for attitude toward E-Government

No.	Attitude toward e-government	Frequencies					Mean	Std. Deviation
		Strongly disagree	Disagree	Neutral	Agree	Strongly agree		
1	The concept of using public e-government services is one that appeals to me.	3 0.5%	16 2.4%	65 9.4%	508 45.3%	489 42.5%	4.27	0.766
2	It would be a pleasure to use the electronic government services provided by the public sector.	6 0.9%	16 2.4%	68 9.9%	399 43.9%	492 42.9%	4.25	0.804
3	Making use of the electronic services provided by the government is a smart move.	3 0.5%	3 0.5%	68 9.9%	456 37.7%	551 51.4%	4.39	0.724
4	It is a good idea to make use of the services provided by the public E-Government.	3 0.5%	3 0.5%	61 9%	454 37.3%	560 52.8%	4.42	0.714

4.4.2 Trust In The E-Government

The vast majority of respondents had a very favorable opinion of the quality of the electronic government. On the other hand, the E-Government quality factor group has given the lowest score possible to this particular aspect. The overall averages of all categories ranged from 3.59 to 3.80, which indicates that the value of confidence in E-Government is low for a variety of reasons, some of which are presented in Table 4.7 below.

Table 4.7: Description of customer's evaluation for trust in the public administration

No.	Trust in the E-Government	Frequencies					Mean	Std. Deviation
		Strongly disagree	Disagree	Neutral	Agree	Strongly agree		
1	E-government websites provide the impression that they are able to protect my personal information, but I am not certain that this is the case.	48 7.1%	71 10.4%	92 13.5%	403 29.8 %	467 39.2%	3.80	0.832
2	The reliability of conventional government services is higher than that of their digital counterparts.	43 6.5%	72 10.5%	94 13.8%	464 38.7%	408 30.5%	3.75	0.913
3	The created security solutions that public organizations utilize are aimed at thwarting hackers and preventing the theft of sensitive information.	62 9.1%	83 12.3%	115 16.8%	423 32.7%	398 29.1%	3.59	0.928

4.4.3 Using P.S.E.T Analysis

This section is used the P.S.E.T Analysis to find the best way to get a safe E-Government by the factors described in this section as the following:

A. Political Factor

Because the model used clarified some political questions concerning the user and clarified how the citizen and the government interact via E-Government, we note that there were wide differences among the people who voted on the questions in the topic. This is because the model used clarified some political questions concerning the user. Table 4.8 and figure 4.4 show the results of the audience, as well as the people's understanding of the current political situation and

their model for an honest E-government. The following table displays the results achieved by the people, as well as their understanding of the current political situation.

Table 4. 8: Political Factor

Question	Both the participation rate of people and their level of confidence in E-Government programs may be significantly impacted by continuous shifts and debates in the political environment.	The level of political stability in a country is one of the most important factors that may make or break the completion of various government programs.	The political deception causes a slowdown in governmental change and innovation, as well as a reduction in the efficiency of e-government initiatives and the public's faith in such efforts.	Interference from politics may have a significant negative impact on both the openness and information security of e-government programs.
Strongly Agreed	535	576	645	508
Agreed	427	405	400	491
Strongly Agreed	69	52	30	46
Disagreed	43	33	4	20
Strongly Disagreed	7	15	2	16

B. Social Factor

Since the general condition and the way a person feels are the same ideas that the average citizen wants to see in the electronic government and have a strong relation with social and information truth, influencing the results of voters in terms of society, we see that audience voting on the questions placed converges on the ideas of the researcher in this subject. The table of findings can be found in Table 4.9, while picture 4.5 can be seen further down.

Table 4.9: Social Factor

	There is a community knowledge on how to securely utilize e-government programs thanks to the efforts of government-run media.	When it comes to questions about information security, rather than consulting government bulletins, I seek the counsel of people I am in intimate touch with.	Holding seminars, workshops, and conferences on implementation and information security measures may help make e-government initiatives a success.	In the event that users have their personal information stolen, government entities will make every effort to rectify the issue as quickly as possible and to the best of their abilities.	Both increasing knowledge about the e-government security project and diversifying the social means are necessary steps in the right direction.
Strongly Agreed	217	341	257	389	465
Agreed	415	427	465	219	373
Nuetral	201	263	235	177	321
Disagreed	219	43	116	215	17
Strongly Disagreed	28	7	7	81	5

C. Economy Factor

In this particular instance, we take notice of the fact that there was a diverse group of individuals casting their votes on the subject since the economic situation impacted the manner in which the job was carried out. The layperson is susceptible to the influences of his surrounding environment as a result of the frequently altering economic conditions. Class distinctions emerged as a result of this, despite the fact that the vast majority of voters participated in the inquiry. As a result of our varied histories and upbringings, we each come from a distinct socioeconomic situation. You can see from this that the range of viewpoints on this subject is centered on the present economic divide, and that E-Government cannot provide even a basic income to a single person. The economy factor is shown in Table 4.10, and the chart for economy factors may be seen in Figure 4.6.

Table 4.10: Economy Factors

	limited finance resource is the huge obstacle of Implementation of E-Government Projects.
Strongly Agreed	489
Agreed	289
Nuetral	207
Disagreed	84
Strongly Disagreed	11

D. Technology Factor

We can see here that the audience members who voted on the questions provided a broad range of variants. This is because there are numerous variations on the technical subject due to the ignorance of technology or the high cost of materials. The public does not understand the applications that have tainted the name of the technology and exploited it in a way that is detrimental and not good, therefore they are afraid of it. This anxiety stems from the fact that technology is a double-edged sword. You can see that the issue is extremely essential to the electronic government because of the technology and the dread of the hazards that this problem represents, in particular when it concerns the specifics that need to be adhered to while working. All of the results for this factor are shown in Table 4.11 and Figure 4.7 respectively.

Table 4.11: Technology Factors

	Users that have a phobia of technology are the primary obstacle that must be overcome for E-Government programs to be successful.	It is critical to the protection of sensitive information that the infrastructure of the information and communication technology industry be kept up to date on a regular basis.	The need for governmental organizations to work together with centers of information and communication technology throughout the world in order to acquire knowledge about contemporary technologies.	The obligation placed on the country's judicial system to promulgate the Criminal Accountability Act for cybercriminals in conjunction with information security (hacker).	There is a risk that my personal information might be compromised if hackers get access to government websites.	In order to avoid hacking and the theft of sensitive information, government institutions deploy sophisticated protective measures.	E-Government service websites don't make me nervous about potential security breaches (such hackers breaking into computers) since I'm not terrified of them.
Strongly Agreed	541	588	645	755	525	505	315
Agreed	298	278	400	208	130	266	435
Neutral	200	198	30	205	205	197	181
Disagreed	23	16	4	4	17	65	31
Strongly Disagreed	12	1	2	2	4	48	119

4.5 CONCLUSION

The data that was taken from the voters who gave the answers that were used in the electronic survey are clarified in this chapter. The electronic survey contained a large number of questions that were both general and specific, and the purpose of the survey was to learn the opinions of the voters regarding the E-Government. The information that was implemented in favor of the

search was successfully obtained by asking 45 questions through Google portals, and the results were taken after more than two weeks have passed, then the process of switching from vague data to understandable and documented data has been completed to solve the problem of Iraq in the future to build a secure government free from all difficulties and influences .It is an excellent analysis because it deals with the problems of the street and the citizen in particular and within its four axes (political, economics, society, technology) and the data were analyzed using the analysis system SPSS. The analysis system that was used was P.S.E.T., and it is an excellent analysis because it deals with the problems of the street and the citizen in particular.



5. RECOMMENDATIONS AND CONCLUSION

5.1 RECOMMENDATIONS

In order for the government to ensure the success of its projects, it must periodically update the E-Government models with the requirements and concerns of citizens. These requirements and concerns can be obtained by monitoring the factors that affect the success of the application. Through our study, we have obtained some recommendations that can be used, and these are shown as follows:

- i. Carry out tests in order to get an understanding of how cities are preparing to implement the project.
- ii. Specify the goal of the primary project and make an effort to include the public by presenting their thoughts and perspectives on what they anticipate and what they want to achieve as a result of the project.
- iii. Try to avoid enforcing any of the projects or installing any of the infrastructure (both hardware and software) If you do both of these things at the same time, there is no use in enforcing the program that the beneficiaries are not using. to ensure that the project can accommodate any future expansion.
- iv. Raise People's Awareness of the Concept of E-Government by Utilizing Television, Social Media, the Internet, Advertising, Schools, and Other Methods of Extending the Importance of Converting to E-Government 4.
- v. To promote computer literacy among those with low means, educational facilities should be made available to them. Additionally, the ICT will have an interest in the educational sector.
- vi. Having a long-term road plan for the execution of the project and securing all of the necessary permits from the new government in order to ensure that the following governments will not change their commitment to the project or diminish their support for the project.

- vii. Raise People's Awareness of the Concept of E-Government by Using T.V., Social Media, the Internet, Advertising, Schools, and Any Other Means Necessary to Extend the Importance of Transitioning to E-Government.
- viii. The government also included other areas, such as improving the economic and healthy climate, addressing the question of power shortages, and encouraging and financing private companies, to start the new generation to build the perfect E-Government. This was done in order to begin the process of building the perfect E-Government.
- ix. Developing the information and communications technology network of the city.
- x. Make a request for help from people who are experts in this field, such as those working in foreign aid.
- xi. Establish a public database (a survey Database). This database contains all of the relevant information for citizens of the town, together with provisions for their security and privacy.
- xii. Highly developed methods of carrying out a project that, thanks to developments like cloud technology, can be completed for a lower cost and in a shorter amount of time.

The administration has decided to concentrate its efforts on the education of Iraqi employees rather than recruiting specialists from other countries. This will result in a cheap cost, a decrease in the unemployment rate, and an increase in popular trust that the government is on the Iraqi side.

5.2 CONCLUAION

A approach that included E-Government Secure and Problem Solver was suggested by this thesis. In this particular setting, there are a few things that the government has to focus on, and it must acknowledge that establishing an electronic government is about more than just giving computers, managing databases, and using the internet. There are some components that have to be brought into view. Problems with energy shortages, urban connectivity issues, education and literacy issues, and other primary concerns linked to the reduction of risks that may occur in the

future should be addressed by policies and recommendations that are common to all organizations that are important to e-government.

One might get the impression that people's faith in e-government across the board has decreased for a variety of reasons, and this is true throughout the whole globe. It is going to take a lot of different policy efforts to get people interested in the political system again. It is the fact that there is not enough understanding of the cyber protection and danger involved in E-Government projects, which is the most important aspect of research, and the core idea behind research is to identify safety risks that prevent the introduction of E-Government projects in developed countries like IRAQ. These safety risks are more than a simple technical issue, and it is this lack of understanding that is most important in research.

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