

Digital Transformation and E-Government in Public Administration: TRNC E-Government Portal Analysis

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ABSTRACT

In the current era, the E-Government phenomenon, which describes the state's provision of public services to its stakeholders through information and communication technologies, has a global character. This study aimed to examine the big data-based e-Government portal, which has many examples in the world and was created by utilizing digital technologies, on the example of the Turkish Republic of Northern Cyprus (TRNC), and whether the portal is user-oriented or not was examined by content analysis method in the context of big data features and citizen-oriented. The absence of any other study on the examination of the TRNC E-Government Portal, which was reorganized in 2021, gives the study a unique quality. At the end of the study, although progress was observed in the information and transaction stages of the TRNC E-Government Portal in the context of e-Government models, it has been determined that success has not yet been achieved in the interaction and integration stages, as well as in the context of citizen-oriented and big data features, it has been concluded that there is not enough level for a successful government portal.

Keywords: Innovation, Public Administration, Digital Transformation, E-Government

INTRODUCTION

In the last quarter of the 20th century, thanks to the significant developments and innovations in the field of information and communication technologies, change and transformation have become dominant in all areas of human life. At the point of public and public service delivery, states have also had to experience this change and transformation to ensure their sustainability and the increasing and changing demands of citizens. With the developments in information and communication technologies, the bureaucratic and classical state understanding has been replaced by the e-Government understanding, which describes public services in the electronic environment shaped within the framework of new public administration and governance concepts. Unlike the classical state, the provision of public services in an electronic environment is the result of certain stages of development (Yürük & Öztaş, 2017, p. 2134). In this sense, it is important to examine e-Government portals that provide one-point access to public services in an electronic environment and aim to provide public services to citizens, businesses, and government institutions effectively and efficiently through information technologies. In particular, it is important to examine whether e-Government portals, which are shaped within the framework of the new public management approach, are user and citizen-oriented, whether they carry big data features, and how they fulfil the intended effective and efficient service delivery. At this point, the aim of the article is to analyse the big data-based e-Government portal implemented within the framework of digital transformation in TRNC. Although there are studies on the examination of the e-Government portal in the TRNC, the lack of a study examining the TRNC E-Government Portal, which was reorganised and implemented in July 2021, gives the study a unique feature. In light of this information, the goal was to obtain information about the current development level and content of the TRNC E-Government Portal by using the content analysis method within the framework of the mentioned problem and importance. For this purpose, whether the TRNC e-Government Portal is user-oriented or not was analysed in terms of its big data features and whether it is citizen-oriented or not.

CONCEPTUAL BACKGROUND

Phenomenology of Innovation

In every period of its life, humanity has sought innovations that will carry it further and ensure the continuity of life, and these innovations have come to life with inventions, discoveries, and scientific research. The innovations that have emerged thanks to technological developments have become a concept of great importance in private/public organisations that want to have a competitive advantage.

In Turkish, words such as 'yenilik', 'yenilenme' and 'yenilikçilik' are used to describe the word 'innovation' (Elçi, 2007, p.2). There are various definitions of innovation in the literature. Schumpeter (1934) defined innovation as the creation of new combinations of existing resources, while the Australian National Audit Office (ANAO, 2009) defined innovation as the creation and implementation of good ideas; De Vires et al. (2014) defined innovation as the introduction of new elements into a service (new knowledge, new organisation, new management/skills), while

Evers et al. (2014) defined innovation as “innovations are significantly new and disruptive to established routines and structures”. Considering the characteristics of innovation, in order for an innovation to be accepted as an innovation, it must have expansionary (rapid diffusion) factors, trigger adaptation in its environment, ensure the combination of innovation characteristics and qualities, express a process and continuity, create change in the user of the innovation, increase the quality of life, provide economic and social benefits to all stakeholders, be a problem-solving process, mostly arise from empathy, kill a market and create a new market, be experiential and be the product of a cultural environment that feeds and triggers it (Şener, 2017). As stated by Güneş (2010), innovation affects individuals, the society consisting of individuals, the national economy and government policies, and the areas under this influence show us that innovation has three dimensions: social, economic, and political.

Digital Transformation and E-Government

Digital Transformation

Digital transformation is one of the important concepts that explain the 21st century. Although a short definition of this concept can be made, digital transformation is not a concept that emerged suddenly. It is a process of change that develops through certain phases. This process (digital transformation), which progressed step by step, gained more momentum, especially with the Covid-19 pandemic that occurred all over the world in December 2019, and the idea of spreading digital transformation to every aspect of human life has turned into a must rather than a necessity. As digital transformation evolves with new technological developments emerging every day, the volume of data increases and thus the digitisation of this data is continuous. In other words, as Teichert (2019) states, digital transformation is not a static but a moving and continuous process. “Therefore, the main components of this transformation are human, process and technology adaptation. The fact that there are different components in this process requires a system approach to digital transformation and the inclusion of all layers of the transforming structure in this process.” (Bozkurt et al., 2021, p. 40). According to Siebel (2022), there are two waves of digital evolution, and these are "First Wave: Digitalisation" and "Second Wave: Internet". According to another source, in the emergence of digital transformation, technological developments, the globalisation of the Internet, the increasing demands of citizens (faster, transparent, easier, cheaper services), the reform efforts of the state in terms of administration, the prominence of information in the economy, and the desire of citizens to increase their trust in the state institution have been effective (Tosun, 2014, p. 50). Although the 4th Industrial Revolution (Industry 4.0) is the first thing that comes to mind when it comes to digital transformation, the technological developments that shaped the history of the world that led to today should not be ignored. With each important innovation and evolution in industry and technology, humanity has developed and entered the next revolution after finishing one revolution. These are the 1st Industrial Revolution (Industry 1.0), 2nd Industrial Revolution (Industry 2.0), 3rd Industrial Revolution (Industry 3.0) and the current 4th Industrial Revolution (Industry 4.0), respectively (Zhou et al., 2015; Banger, 2018; Kosif, 2019; Sert et al., 2019). Industry 4.0 components are listed as big data and analytics, cyber-physical systems and simulation, autonomous robots - smart machines, vertical-horizontal integration, cyber security, internet of things, additive manufacturing, augmented reality, and cloud computing - internet of services (Banger, 2018, p. 33). With the emergence of the 'new public administration (NPA)' concept in the 1970s (Karaçor & Oltulu, 2011, p. 404) and the concept of 'governance' after 1997 (Can, 2019, p. 19), reform efforts in state structuring have started to be implemented. In addition to all these developments, in the globalising world, the e-Government phenomenon, which describes the digital transformation in the political field, has emerged due to factors such as developments in information and communication technologies, the formation of a knowledge-based economy and the transformation of society into an information society. E-Government projects were first started to be used in the late 1990s (Chen & Gant, 2001, p. 343-344). When we look at the studies that contributed to the formation of the e-government understanding, studies such as the “1993 Gore Report, which sees the electronic state as an understanding of public administration that produces less costly and more effective public services, and the Green Book for the Electronic Delivery of Public Services published in the UK in 1996 [...]” (Güngör, 2007, p. 128-129 as cited by Can, 2019, p. 24-25) have a valuable place.

E-Government

The concept of electronic government, i.e., e-Government, is used to describe government services in the virtual (electronic) environment, i.e., public services carried out through information and communication technologies (especially the internet and the web) (Yıldız, 2011, p. 1). According to another definition, e-Government is "the uninterrupted and secure execution of the duties and services that the state is obliged to fulfil towards its citizens and the duties and services of citizens towards the state in electronic communication and transaction environments" (İlgaz, 2016, p. 5). In 1993, the basic components of the e-Government concept, which was used for the first time (Maraş, 2011, p. 122), are listed as communication device, communication channel and website, while the basic elements of e-Government are listed as citizens (e-citizens), companies (e-companies), institutions (e-institutions) and public officials (e-officials) (Acar, 2018, p. 23-24-25). Accordingly, e-Government interaction areas are stated as government to government/G2G, government to citizen/G2C, government to business/G2B and government to

employee/G2E) (Fang, 2002, p. 8-9). However, although these areas of interaction indicate the reality, they are not sufficient in the current era. The reason for this is that new communication channels (social media environments such as Facebook, Twitter, Instagram etc.) have been added to the old communication channels (e-mail and text messages) and stakeholders (non-governmental organisations, private sector, and citizens) who were passive recipients have now become content producers. "In the light of these discussions, the clusters of citizen-to-citizen (C2C) and civil society-to-citizen (NGO2C) can be added to the clusters of government-to-government, government-to-citizen and government-to-private sector, which are accepted as the main categories of the e-Government concept in the literature." (Yıldız, 2011, p. 7).

E-Government systems are projects that require significant financial resources (investment) in every country where they are implemented. Therefore, it is important to identify the problems that may prevent the success of these projects and to take the necessary measures. The Organisation for Economic Co-operation and Development (OECD) stated that several problems arise in the implementation of e-Government and classified these problems as internal and external e-Government barriers. Accordingly, the OECD identified external barriers that may hinder the adoption of e-Government as legal and regulatory barriers, financial (budget) barriers, technological barriers, and the digital divide, while internal barriers include lack of co-operation for seamless services, lack of plan and vision (2003). The elements required for a successful e-Government are given under the name of 'e-Government success factors'. Naralan has stated the factors that are sufficient for the countries that have achieved success in the e-Government system as management factor, institutional structure factor, technical infrastructure factor, human infrastructure factor, e-government portal factor and development factor (2010, p. 460).

E-Government Development Models

Since e-Government refers to an active process, its development has been subjected to classifications in the form of stages or steps, and these have been named in different ways in the literature as 'e-Government development models', "evolution model' or 'maturity model' [...]" (Demir, 2018, p. 15). Acar summarized these different development models as the Layne and Lee Model (four stages: cataloguing, transformation, vertical integration and horizontal integration), the United Nations Model (five stages: emergence, development, interaction, transaction and integrated service), the Deloitte Model (six stages: information dissemination, two-way transaction, multi-purpose portals, portal customisation, combination of common services and full interaction), the Hiller and Belanger Model (five stages: simple information dissemination, two-way communication, service and monetary transaction, vertical and horizontal integration and political participation) and the Gartner Model (four stages: existence, transaction, interactive transaction and transformation) (2018, p. 30). However, when all these different e-Government development models are analysed, it is possible to make basically four classifications for the e-Government maturity model. According to this classification, e-Government development models can be listed as information, interaction, transaction, and integration (transformation) (Yürük & Öztaş, 2017; Karataş & Tarhan, 2021). The first stage, the 'information' stage, "covers the content that users have access to only by reading on websites, which is non-procedural, simple and mostly in the form of brochures and booklets and is intended to inform citizens" (Yürük & Öztaş, 2017, p. 2134). In the second stage, 'interaction', the state can communicate (interact) with its citizens (stakeholders) in various ways. In other words, citizens (stakeholders) can communicate with the authorities via e-mail and can access and download the documents and forms they want even outside working hours (7/24) (Karataş & Tarhan, 2021, p. 322). In the third stage, the 'transaction' stage, "many transactions (tax payments, visa passport procedures, etc.) can be done online without going to public organisations" (Yürük & Öztaş, 2017, p. 2134) and in the last stage, the 'integration (transformation)' stage, "state institutions are integrated among each other, and a main electronic state portal is created for the relevant stakeholders" (Karataş & Tarhan, 2021, p. 323).

E-Government Practices in the World

The United Nations Department of Economic and Social Affairs (UN DESA) publishes the 'E-Government Development Index' (EGDI report), a report that assesses the e-Government development status of United Nations member states (193 countries) from 2001 to the present day (UN E-Government Knowledge Base). At the end of the evaluation, the top 14 countries with the highest EGDI values are Denmark, the Republic of Korea, Estonia, Finland, Australia, Sweden, the United Kingdom, New Zealand, the United States of America (USA), the Netherlands, Singapore, Iceland, Norway, and Japan (UN, 2020, p. 11-12). When examples from countries are examined, the prominent ones are as follows:

Denmark had the highest EGDI globally in 2018 and 2020 and is one of the seven countries in Northern Europe and one of the five countries in the European Union that are part of the highest rating class (VH) (UN, 2020, p. 12). The objectives that Denmark has set at the beginning of e-Government are that e-Government should play an active role in creating a network society, the public sector should work and communicate in a network environment, public services should be provided to citizens and institutions in a very comprehensive manner from

a single centre, and the tasks of the public sector should be performed in the best way wherever they are used (Kırçova, 2003, p. 152). While the Republic of Korea ranks 2nd after Denmark, it ranks 1st in the 'online service index (OSI)', one of the three dimensions of e-Government (UN, 2020, p. 12). The first step of the digitalisation of the government of the Republic of Korea started with the computerisation of the public administration in the 1960s and 1970s, the establishment of national information communication networks in the 1980s, the informatisation of the national administration in the 1990s, the creation of an integrated e-Government in the 2000s, the realisation of the integration of government services in the 2010s, and the sixth and final step is the stage of intelligent digital government (Republic of Korea E-Government Portal). The USA ranks 9th in the EGDI report. While the USA's development index was 0.8769 in 2018, the development index increased to 0.9297 in 2020 (UN, 2020, p. 11-12). The United States has based its e-Government strategy on the elements of user satisfaction, flexibility, and control (Yürük & Öztaş, 2017, p. 2137). The United Kingdom ranks 7th in the report. As stated in the report, while the development index in 2018 was 0.8999, the development index increased to 0.9358 in 2020 (UN, 2020, p. 11-12). In the United Kingdom, while e-Government studies started in the nineties, e-transformation studies gained further momentum with the addition of the Electronic Representation Department to the state structure, and it was ensured that the studies were carried out in a coordinated manner at local and national level (Yürük & Öztaş, 2017, p. 2139). Australia ranks 5th in the report. As stated in the report, while the development index in 2018 was 0.9053, the development index increased to 0.9432 in 2020 (UN, 2020, p. 11-12). The Australian government is a country that contributes to the growth and development of e-Government services and is an example for other countries. In 2001, the government set the goal of providing all government services online and created a comprehensive road map for this purpose. In 2002, the Ministry of Communications, Information Technology and the Arts launched the e-Government vision (Demirel, 2006, p. 108-109).

Although the process of transition to e-Government in Turkey started with the developments in the field of information and communication technologies (ICT) in the 1990s, the introduction of e-Government took place in the 2000s, i.e., within a period of 10 years (Ekinci, 2018, p. 336). According to Erdem, e-Government transition studies in Turkey are listed under five headings. These are E-Turkey Initiative (2001), E-Transformation Project (2003), Information Society Strategy (2006), Ninth Development Plan (2007-2013) and Tenth Development Plan (2014-2018) (2014: 738). The last important study on the transition to e-Government is the Eleventh Development Plan 2019-2023. This study was presented by the Republic of Turkey Ministry of Development in 2018 under the title of 'Development of e-Government services' and with this plan, it is aimed to contribute to the Eleventh Development Plan to be realised between 2019-2023 by evaluating the status of e-Government in Turkey and in the world and the developments that are thought to be possible in this field in the near future. In the said plan, the principles to be followed in the provision of e-Government services (Article 5) in the text of the 'Regulation on the procedures and principles regarding the execution of e-Government services' dated 2016 and numbered 29820, which constitutes the basis for Turkey e-Government project and studies, were emphasised (Republic of Turkey Ministry of Development, 2018, p. 21-22). In the '2020 UN E-Government Development Index (EGDI)' report, Turkey ranked 53rd with an EGDI value of 0.7112 in 2018 and 53rd again in 2020 with a value of 0.7718 (UN, 2020, p. 48).

GENERAL EVALUATION OF TRNC E-GOVERNMENT PORTAL

When the literature on the examination of E-Government gateways is reviewed, it is seen that content analysis method is generally used among data collection methods in these studies. Content analysis is defined as "a systematic, repeatable technique in which some words of a text are summarised into smaller content categories by coding based on certain rules" (Büyükoztürk et al., 2020, p. 259). This article aims to provide information about the current level of development and content of the TRNC E-Government Portal. For this purpose, whether the TRNC e-Government Portal is user-oriented or not was analysed in the context of big data features and citizen orientation.

As stated in the informative publications of the TRNC E-Government Portal, e-Government portal is a website that provides access to all public services from a single point. The aim of the portal is to provide public services to citizens, businesses, and government organisations effectively and efficiently through information technologies. E-Government is the electronic delivery of services normally provided to citizens by the government. In this way, the government aims to provide its services to citizens in the easiest and most effective way, in a quality, fast, uninterrupted, and secure manner. With the e-Government approach, which has started to replace the bureaucratic and classical government understanding, it is aimed to provide easy access to every government institution and every individual to systems using information technologies and government institutions and organisations and the services provided by these institutions.

This study aims to obtain information about the current development level and content of the TRNC E-Government Portal by using the content analysis method. For this purpose, whether the TRNC e-Government Portal is user-oriented or not was analysed in the context of big data features and citizen orientation.

While it is sufficient to type in the address www.edevlet.gov.ct.tr and browse the page to access the contents offered for information purposes in the TRNC e-Government Portal, a password, e-signature, or mobile signature is required to access personal information or e-Services that require authentication. The user password required to utilize the services offered through the E-Government portal is obtained from the district governorships in each district in the TRNC. According to the information provided on the TRNC State Portal, the services offered to citizens through the e-Government portal are information services, e-Services, payment transactions, short cuts to institutions and organisations, information updates and announcements, and information messages from institutions to citizens.

When logging into the TRNC E-Government Portal, there is the TRNC official emblem (logo) at the top left of the main page. On the top right of the portal, there are five tabs in total: a tab with an English guide to provide information about the portal to foreign users, a tab with accessibility features (text-only view and more pronounced focus) to facilitate users with disabilities or physical limitations, a tab that allows users to customise their pages, a tab that allows users to search for the information or service they want (how can I help you?), and a login tab for users to access personal information or e-Services that require authentication.

When the main tabs of the portal are analysed, it is seen that there are five main tabs on the main page. These tabs are 'e-Services', 'institutions', 'municipalities', 'government transactions' and 'quick solution'. Figure 1 below shows the appearance of these five tabs.



Figure 1: Main Tabs on the Home Page of the TRNC E-Government Portal

In the "e-Services" (e-Hizmetler) tab, the e-Services offered by official institutions are listed in alphabetical order of the names of the institutions; in the "institutions" (Kurumlar) tab, the list of all official institutions of the TRNC is given in alphabetical order; in the "municipalities" (Belediyeler) tab, the list of 28 municipalities in six districts is presented supported by a map; the next tab, 'government transactions' (Devlet İşlemleri), provides information on issues of interest to citizens about government transactions (education, general information, working in the TRNC, TRNC citizenship/passport, travelling, foreigners); and the last main tab, 'quick solution' (Hızlı Çözüm), provides information on communication methods that users can apply for the solution of problems (complaints, suggestions, questions and requests) related to the e-Government portal.

In the 'e-Services' main tab of the portal, the e-Services offered by public institutions are arranged in alphabetical order of the names of the institutions. Accordingly, the Deputy Prime Minister's Office, Ministry of Tourism, Culture, Youth and Environment has one service offered through the e-Government portal (electronic document management system document verification), Ministry of Public Works and Transport has one service offered through the e-Government portal (electronic document management system document verification), the Information and Communication Technologies Authority (ICTA) has one service (ICTA Academy Online Education Platform), the Ministry of Labour and Social Security has two services: an identity verification service (Social Insurance Department - insured login) and a service offered through the e-Government gateway (electronic document management system document verification), the Ministry of Economy and Energy has one service (electronic document management system document verification) available through the e-Government portal, the Customs and Duties Department has one service for identity verification (customs information system), Security Forces Command's ASAL and Mobilisation Branch Directorate has six services: booking/appointment, ASAL referral procedures (querying referral information), ASAL military service deferment procedures (querying

deferment information and military service status information) and mobilisation services (querying vehicle mobilisation information and querying personnel mobilisation exercise), the Ministry of Interior has one service (electronic document management system document verification) available through the e-Government gateway, the TRNC Prime Ministry has two services offered through the e-Government portal in total, one service (for electronic document management system document verification) and one service offered for identity verification (public administration system). The TRNC Courts have two services in total, namely the marriage information service and the service in the direction of identity verification (lawyer portal), the TRNC Central Bank has one service (daily exchange rates) available through the e-Government portal, the Ministry of Finance has one service (electronic document management system document verification) available through the e-Government portal, the Ministry of Education and Culture has a total of two services, one for identity verification (MoNE information system) and one through the e-Government gateway (electronic document management system document verification), the Lotteries Unit has one service (lottery enquiry) available through the e-Government portal, the Office of the Official Receiving and Recordship has five services in total, one service for identity verification (e-legal system) and four services (enquiry of new information of a commercial company, enquiry of the company one owns, enquiry of commercial company information and commercial company search) offered through the e-Government portal. The Ministry of Health has four services (analysis result, Covid-19 test result, vaccination information inquiry and electronic document management system document verification) available through the e-Government portal, the Ministry of Agriculture and Natural Resources has one service (electronic document management system document verification) available through the e-Government portal, the Trade Department has one service (importer and exporter certificate enquiry) available through the e-Government portal, the Traffic Office has one service (enquiry of vehicles registered in my name) available through the e-Government portal, and finally, the General Secretariat of the Supreme Electoral Council and the permanent voter registers offices have one service (voter register information) available through the e-Government portal. In addition to the e-Services provided under 'institutional services' on the page in question, access to 'municipal services', 'university services', 'company services', 'new services', 'frequently used' and 'access to other government portals' tabs are also provided. When these tabs were analysed, it was observed that the content of the 'university services', 'company services' and 'new services' tabs had not yet been created.

In the light of the above information, it would not be wrong to say that e-Services in organisations mostly consist of the Electronic Document Management System (EDMS), which enables the archiving of the input and output of all kinds of documents arising from the activities of the organisation. In addition, it was noted that some other e-Services other than EDMS were included in the 'most used services' tab and were few. To provide easy, fast, effective, and high-quality services to citizens, it is important to increase the e-Service capacity and to ensure that the services of all institutions are interconnected, in other words, to ensure integration in services. Integration of services also plays a major role in increasing the acceptance and use of e-Government, hence the portal. However, when the 'e-Services' tab is taken into consideration, although the variety of services under this tab is low, when the contents of the 'institutions' and 'municipalities' tabs are examined, it is seen that although both institutions and municipalities do not have services offered through the e-Government Gateway infrastructure, the contact information of these institutions and municipalities (institution name, web page, tel., e-mail, fax, address supported by a map, etc.) are presented in the lower steps of the main tab in the portal, enabling the user to easily access the desired institution or municipality and paving the way for them to utilize online transactions to existing (or future) e-Services. This is also important in terms of portal design (in terms of web design) as an infrastructure preparation to ensure that the increasing variety of services (increasing e-Services) can be easily delivered to the user in the future processes.

'When the main tab 'Institutions' is accessed, the list of the main legislative, executive and judicial institutions of the TRNC State is accessed, and when the names of the institutions are entered, the contact information of the institution (institution name, web page, tel., e-mail, fax and address supported with map) and the list of electronic services offered through the e-Government gateway and/or their own websites are accessed. The list in question is arranged in alphabetical order of the names of the institutions. When you click on any institution in the list, you can access the contact information of the relevant institution (institution name, web page, tel., e-mail, fax, and address) and a map showing its location. It has been observed that when clicking on some institutions, information such as 'there is no service offered through the e-Government Gateway infrastructure', 'services offered through the e-Government Gateway' or 'services offered through the website of the institution' is presented. The names of the institutions in the portal, whether they have services through the e-Government portal, and if so, what the service is are presented in Annex 1.

In addition, although some institutions do not have services offered through the e-Government portal infrastructure, it is seen that by accessing the services of these institutions through their own websites and

presenting their contact information (institution name, web number, tel., e-mail, fax, address supported by a map) on the portal, the user can easily access the desired institution and utilize their existing online transactions.

There are six districts and 28 municipalities affiliated to districts in the TRNC. When logging in to the 'municipalities' main tab of the portal, the list of municipalities under the district is accessed by selecting the districts with the phrase 'select the district from the map above or the selection box below to access the services offered by the municipalities in your district'. Clicking on any municipality provides access to the contact information of the relevant municipality (name of the institution, web page, telephone, e-mail, fax, and address supported with a map), and the list of electronic services offered through the e-Government gateway and/or their own websites. Annex 2 provides information on which municipalities are located under which districts, in the order in which they are presented in the portal, and the e-Services offered by the municipalities (through the e-Government portal and/or through their own websites). While municipalities have a single service (EDMS) offered through the e-Government gateway, they have services such as debt enquiry, payment transactions, e-municipality forms under the name of e-municipality services on their own websites.

When the 'government transactions' tab, which is another of the main tabs of the portal, was accessed, it was observed that some topics (education, general information, working in the TRNC, TRNC citizenship/passport, travelling and foreigners) were created on this page. While 'Higher Education Scholarship and Information System (YOBIS)' and 'university equivalence procedures' related to higher education were created under the heading of 'education', and information is provided about the subjects, it was observed that the following subject headings were opened under the heading of 'general information', but there was no information in the content: 'judicial matters', 'social insurance benefits received by employees', 'how can I lodge a complaint about environmental pollution?' 'stay in safety', 'TRNC international postcodes', 'housing unit', 'immigration issues', 'How do I import/export?', 'In which cases and how can I apply to the Ombudsman?', 'social insurances electronic premium payment', 'traffic issues', 'procedure followed regarding investors' and 'importation of pet animals accompanied by passengers from abroad to the Turkish Republic of Northern Cyprus'. It was observed that, under the heading of 'working in TRNC', the subject headings of 'HSO (occupational health and safety)', 'public vacancies', 'working life in the TRNC' and 'things to know about work permit procedures for foreigners' were created, however, information is provided only under the heading of 'public vacancies' (redirection to the website of the Public Service Commission), and there is no information on the content of other headings. It was determined that, under the heading of 'TRNC citizenship/passport', the heading of 'application for citizenship by marriage' was created and information is provided on this subject (Redirection to the website of the Directorate of Immigration Office), while under the heading of 'travel', subject heading of 'foreign travel transactions' was created and by giving information on the subject, directions were made to the websites of the relevant authorities. Under the last heading, 'foreigners', subject headings of 'what needs to be done to get a student permit', 'how to buy property in the TRNC as a foreigner' and 'visitor permit' were created and by providing information on the subject, directions were made to the websites of the relevant authorities. However, an important point to be noted here is that the phrase 'government operations', which includes the classification of some e-Services according to subjects, may not be clearly understood by the user (what its content is) and that tabs according to subjects should also be included on the main page of the portal in order for the user to access the desired service directly and easily. The fact that the services offered on the portal are located on the main page according to their subjects is considered important both in terms of increasing the speed of service and ensuring ease of use, and it is thought that the portal plays a major role in the acceptance and use of the portal and e-Government by the users.

The 'Quick solution' main tab provides information about the contact methods that users can apply for the solution of problems (complaints, suggestions, questions, and requests) related to the e-Government Gateway and is the tab where complaints, suggestions, questions, and requests are received for the solution of problems related to the e-Government Gateway. When logging in to this tab, 'contact and help centre' and 'quick solution centre' sub-tabs are encountered. 'Contact and help centre' tab includes 'general information', 'contact form' and 'social media' sub-headings. Under the heading 'general information', information about the problems encountered during the use of the e-Government Gateway and the authorities to seek written information and answers (117 call centre, e-mail, contact form) to resolve these problems are provided, under the heading 'contact form', complaints, suggestions, questions and requests regarding the problems encountered during the use of the e-Government Gateway can be submitted by filling out the form, and under the heading 'social media', information about the official social media accounts of the e-Government Gateway is provided. The 'quick solution centre' sub-tab contains the sub-headings 'I am having login problems' and 'I am having problems with my personal information'. Under the heading 'I am having login problems', there are ready-made questions and answers related to the problem experienced by the user or the information they want to access, while under the heading 'I am having problems with my personal information', there are ready-made questions and answers under the subheadings 'there is an error in my address information on the e-Government portal', 'I do not know how to update my personal information on the e-

Government portal' and 'there is an error in my identity information on the e-Government portal'. It is noteworthy that in the main tab where communication methods are specified, written text and information are used in all methods of communication with the e-Government official. When these communication methods were clicked on and examined, it was observed that 117 e-Government call centres and e-Government social media accounts (Twitter, YouTube, Instagram, Facebook) were not active and up to date, except for the 'quick solution centre' and 'write to us' tabs. The fact that the 'live support' service, which provides the user with a quick solution and the opportunity to submit any request, complaint, or suggestion instantly, is not provided and that social media accounts, which are seen as an up-to-date method that enables easy communication with e-Government officials, are not active and up to date, have been identified as a deficiency in terms of effective communication.

Apart from the main tabs of the portal, other tabs on the home page are 'most used services', 'news and announcements' and 'we are with you in social media too!' Accordingly, the 'most used services' are; 'Daily exchange rates' offered through the e-Government portal infrastructure in cooperation with the TRNC Central Bank, 'vehicle inquiry registered in my name' offered through the e-Government portal infrastructure in cooperation with the Traffic Department, 'test result' and 'vaccination information query' offered through the e-Government Gateway infrastructure in cooperation with the Ministry of Health, 'marriage information service' offered through the e-Government Gateway infrastructure in cooperation with the TRNC Courts, 'military service status query', 'postponement information query' and 'referral information query' offered through the e-Government Gateway infrastructure in cooperation with the Security Forces Command, 'voter registry information' offered through the e-Government portal infrastructure in cooperation with the General Secretariat of the Supreme Electoral Council and permanent voter registry offices. However, while analysing the portal, it was observed that some transactions could not be completed due to technical problems in the system. The fact that some services cannot be provided due to technical problems depending on the day shows us that necessary measures should be taken to minimise technical problems. It is important to identify the factors leading to this situation and to improve service quality.

Under the 'news and announcements' tab, which is another tab (heading) on the home page, it has been observed that information services are provided under the sub-headings of the following in line with their subjects: 'document verification', which allows the user to verify documents created in the electronic document management system; 'life in Cyprus', which allows you to follow the calendars of events such as festivities, festivals, concerts, exhibitions, theatres, etc. in the TRNC and access the web page for exploring the TRNC; 'newly added services', which allows you to access the list of the newest services added to the e-Government portal; and 'Atam', which allows you to visit the website of the Atatürk Research Centre. In the presentation of the announcements and news in this tab, it is considered important to include more up-to-date information as well as general information in terms of the activity and timeliness of the page.

In addition, towards the end of the home page, under the heading 'we are with you in social media too!...', it is stated that there are official social media accounts where users can be informed about the developments related to the e-Government Gateway and where users can report questions and errors, and that these social media accounts are Twitter, Facebook, YouTube and Instagram, as well as social media usage guide information. However, when logging into social media accounts, it is seen that these accounts are not yet fully up-to-date and active.

At the bottom of the main page, under the title 'e-Government Gateway', the following sub-headings are included and explained: 'home page' to return to the home page, 'English' to provide foreign language option, 'about us' to provide information about the e-Government Gateway, 'legal notice' to explain the legal notice and general conditions of the e-Government Gateway, and 'privacy and usage' tabs to explain the security of personal data, copyrights, limits of liability, e-mail and text message notifications; 'frequently used services', 'newly added services', 'municipal services' and 'all institutions' under the heading 'e-Services'; 'all institutions' and 'municipalities' under the heading 'public institutions'; 'general help', which provides information on how citizens can use the e-Government portal and what kind of services are offered, 'frequently asked questions', which answers questions about e-Government, 'our policies', which presents password and information security policies, 'for your security', which states the things to be considered for the security of password and personal information; 'contact us', which includes general information about communication, contact form, social media, login or personal information problems, and 'help for non-citizens', which includes an English guide to provide information about e-Government and e-Government gateway to foreign users; 'text-only view', 'more prominent focusing', 'keyboard shortcuts' in order to provide easy access to information and services on the e-Government Gateway (for people with disabilities or physical limitations) and 'site map' showing the main page listed collectively in order to provide easy access to the main categories and pages on the e-Government Gateway under the title of 'accessibility'. Finally, the communication channels that act as a bridge between the e-Government Gateway and the users, i.e., the methods by which users can contact the e-Government Gateway, are presented under the heading "Need help?"

You can contact us using the following methods. These communication methods are listed as 'quick solution centre', 'write to us', 'e-Government call centre', 'Twitter' and 'Facebook'. When these communication methods, which are also described under the other tabs of the home page, were clicked on, and examined, it was observed that the other tabs (117 e-Government call centre, Twitter, YouTube, Instagram, and Facebook) were not active and up to date, except for the 'quick solution centre' and 'write to us' tabs as mentioned before.

CONCLUSION

As stated in the section on e-Government development models (evolution models, maturity models) in this study, although the items in these models are subjected to different rankings, the main classification that is basically accepted can be listed as information, interaction, transaction, and integration (transformation). When these e-Government development models are taken into consideration, it is observed that the TRNC E-Government Portal has made significant progress in the information (online presence of the portal, presentation of information, brochure-booklet format, most of the information presented is static and has little interaction with the user) and transaction (online forms and transactions, i.e. online tax payments, visa passport procedures, etc.) stages, while the interaction (interactive, two-way communication) and integration (linking all services, integration) stages have not yet been partially achieved.

Pippa Norris (2002) states that interactivity and informational transparency form the basis of the citizen orientation of state-owned Internet applications, while Wimmer ve Holler state that user-oriented and easy-to-use e-Government portal interfaces should have the following characteristics: learnability (easy to learn), efficiency (efficient to use and help can be obtained in reaching the desired service and information), memorability (memorable, easy to remember), errors (minimising the user's error rate), satisfaction (pleasant use of the interface to satisfy the user and fast, efficient access to the desired results), functionality (appropriate and intuitive visualisation of functionality and process flow, i.e. each service should be clearly designed so that the user can easily learn what it does and how it works) and reliability (the system should be predictable and the user should be able to trust the way the system works and its timelines) (2002, p 175-176). As stated in many sources, big data should have the following characteristics: diversity (Kaisler et al., 2003; Bayrakçı & Albayrak, 2019; Agocuk & Çiftçi, 2020), volume (Zadrozny & Kodali, 2013; Bayrakçı & Albayrak, 2019; Agocuk & Çiftçi, 2020), speed (Zikopoulos, 2012; Bayrakçı & Albayrak, 2019; Agocuk & Çiftçi, 2020), accuracy (Bayrakçı & Albayrak, 2019; Agocuk & Çiftçi, 2020), value (Bayrakçı & Albayrak, 2019; Agocuk & Çiftçi, 2020), comprehensiveness (Bayrakçı, 2015; Agocuk & Çiftçi, 2020), indexicality and resolution (Agocuk & Çiftçi, 2020), relationality (Agocuk & Çiftçi, 2020) and flexibility (Marz & Warren, 2012; Agocuk & Çiftçi, 2020). In the light of the above information, whether the TRNC e-Government Portal is user-oriented or not has been analysed in the context of big data features and citizen orientation. Accordingly, the TRNC E-Government Portal is considered to be as follows.

- Including the phrase gov.ct.tr indicating that the portal is an official web page of the state, which enables the portal to be characterised as reliable by the citizens, and the TRNC official emblem on the home page (accuracy + reliability);
- Ensuring secure login and logout by requiring a password, e-signature, or mobile signature in the log in of the portal (security + flexibility);
- Having an English language option for non-Turkish speakers living in TRNC, which is accepted as a common language in the world (flexibility + diversity + value + comprehensiveness + functionality);
- To eliminate the digital divide, which is one of the problems faced by e-Government, necessary arrangements having been made to facilitate the use of users with disabilities or physical limitations (flexibility + comprehensiveness + value + diversity + efficiency + functionality);
- Giving the update dates of the information related to the portal content (accuracy);
- The possibility to customise the page (diversity + value) is seen as a plus of the portal, but;
- Increasing the volume of e-Services in e-Government applications (flexibility + volume + diversity + comprehensiveness + relationality + satisfaction);
- e-Services categorised by subject (justice, environment, agriculture and animal husbandry, government and legislation, education, general information, security, business and career, personal information, health, social security and insurance, complaints and information, telecommunications, traffic and transport, taxes, fees, and penalties, etc.) are placed in the main tabs of the portal (speed + satisfaction + learnability + functionality);
- Transparently sharing with citizens, in textual and/or graphical form, data on E-Government gateway (number of registered users, number of services, mobile services, number of institutions providing services) and citizen applications (number of applications, the most common subject of applications, evaluation status of applications, etc.) (transparency);
- In addition to the complaints, suggestions, questions, and requests received regarding the use of the portal and the problems encountered, ensuring the receipt of complaints, suggestions, questions, and requests

regarding all other government transactions that cannot be reached or for which suggestions are desired (satisfaction + comprehensiveness + flexibility);

- In the e-Government system based on two-way (interactive, interactive) communication, realisation of 'live support' service representing instant service provision (interaction + diversity + volume + value + flexibility + comprehensiveness + efficiency + satisfaction + speed);
- Ensuring that the 'live support' service and all 'social media' accounts, which play an important role in ensuring the relationship, effective communication and participation of the user or citizen with the state, are up to date (value + comprehensiveness + flexibility + efficiency + productivity + satisfaction + speed);
- Diversification of the solution presentation (efficiency + satisfaction + diversity + volume + speed + comprehensiveness + flexibility) for possible problems ('I am having login problems' and 'I am having problems with my personal information') in the quick access tab of the portal;
- Enabling the citizen who makes any complaint, suggestion, question, and request to enquire about the status of the application and providing information on how many days the applications will be answered (comprehensiveness + flexibility);
- Providing more detailed information (hierarchical structure of the portal, mission, vision, etc.) in the 'about us' tab added to provide information about the E-Government portal (transparency + diversity + volume + comprehensiveness + relationality + flexibility);
- More up-to-date information in the news and announcements presented in the 'News and announcements' tab (diversity + volume + flexibility + relationality);
- Taking measures to minimise technical problems that reduce the quality-of-service delivery (satisfaction + error + efficiency);
- Adding a return button to each page for easier switching between tabs (satisfaction + functionality + speed);
- Enabling the use of existing e-services via smartphone (for easy access and instant information) (diversity + speed + value + comprehensiveness + flexibility + satisfaction).

As a result, states that want to survive in the current era must incorporate the e-Government phenomenon, which shows that the state exists in the digital world. However, it is equally important not only to incorporate, but also to ensure the acceptance and use of the created system by its users. In this sense, the content of e-Government portals that provide access to public services from a single point in e-Government, whether they are user-friendly or not, whether they have big data features or not, and whether they are citizen-centred or not play a major role in their acceptance and use. Therefore, this study aims to obtain information about the current development level and content of the TRNC E-Government Portal. In this direction, whether the TRNC E-Government Portal is user-oriented or not was analysed in the context of big data features and citizen orientation.

At the end of the review, when the development models of e-Government are taken into consideration, it was found that although progress has been made in the information and transaction stages of the TRNC E-Government Portal, the necessary success has not been achieved in the interaction and integration stages, and success has not yet been achieved in the context of citizen orientation. In addition, only efficiency, functionality, and reliability in terms of user orientation and ease of use, and accuracy, diversity, comprehensiveness, flexibility, value (five out of nine features) in terms of big data features were partially improved, but it was concluded that they were not at a sufficient level for a successful Government portal.

However, it should be noted that there is a portal infrastructure that will enable the stages or features that have not yet been achieved to be easily realised. This shows us that the TRNC E-Government Portal design has a flexible structure and can turn into a successful e-Government portal if the deficiencies are completed in the future.

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Annex 1.

Table 1: Institutions and Services under the "All Institutions" tab in the TRNC E-Government Portal

Institution Name	No Service via e-Government Gateway	Service via e-Government Gateway	Service
EU Coordination Centre	✓		
Fuel Unit	✓		
Minimum Wage Determination Commission (Affiliated Institution)	✓		
Ataturk Teacher Academy	✓	✓	Services Provided through the Institution's Website (Decisions of the Council of Ministers)
General Secretariat of the Council of Ministers	✓		
Prime Ministry	✓		
Prime Ministry Auditing Board	✓	✓	Services Provided through e-Government Gateway (Electronic Document Management System Document Verification)
Deputy Prime Minister, Ministry of Tourism, Culture, Youth and Environment		✓	Services Provided through e-Government Gateway (Electronic Document Management System Document Verification)
Ministry of Public Works and Transport		✓	Services Provided through the Institution's Website (Bayrak Radio and Television Organisation)
Bayrak Radio and Television Corporation		✓	BTK Academy Online Training Platform and Services Provided through the Institution's Website (Information and Communication Technologies Authority Online Application System (Application Forms) and Information and Communication Technologies Authority Online Payment)
Information and Communication Technologies Authority (BTHK)		✓	Services Provided through the Institution's Website (TRNC Pharmacies on Duty, Laboratory Results, Outpatient Clinic List and Outpatient Clinic Appointment)
Budget Department	✓		
Cengiz Topel Hospital			
Presidency	✓		
Presidential Symphony Orchestra	✓		
Republican Assembly		✓	Services Provided through the Institution's Website (Parliament TV Live Broadcast and Parliament TV Parliamentary Meetings)
Cyfruvex Ltd.	✓		
Department of Labour	✓		
Ministry of Labour and Social Security		✓	Identity Verification Services (Social Insurance Department - Insured Login), Services Provided through e-Government Gateway (Electronic Document

Environmental Protection Department	✓	Management System Document Verification) and Services Provided through the Institution's Website (TRNC Find a Job Portal)
EMU Foundation Board of Managers	✓	
State Printing House	✓	Services Provided through the Institution's Website (TRNC Official Gazette)
State Property and Materials Department	✓	
State Laboratory Department	✓	Services Provided through e-Government Gateway (Electronic Document Management System Document Verification)
State Planning Organisation	✓	
State Symphony Orchestra and Choir	✓	
State Production Farms Department	✓	
Ministry of Foreign Affairs	✓	
Foreign Affairs Department	✓	
Dr. Burhan Nalbantoğlu State Hospital	✓	
E-Government Executive Committee	✓	
Department of Education Shared Services	✓	
Ministry of Economy and Energy	✓	
Department of Information	✓	Services Provided through the Institution's Website (TRNC Pharmacies on Duty, Laboratory Results, Outpatient Clinic List, Outpatient Clinic Appointment)
High Council of Antiquities and Monuments	✓	
Department of Antiquities and Museums	✓	
Famagusta State Hospital	✓	Services Provided through the Institution's Website - Vehicle Registration Fee Payments, Internet Tax Office (Fee Collection/Document Verification/Calculation)
Revenue and Taxation Office	✓	
Youth Welfare Office	✓	Identity Verification Services (Customs Information System) and Services Provided through the Institution's Website (Customs and Duties Department Public Satisfaction Survey)
Department of General Secondary Education	✓	
General Agricultural Insurance Fund	✓	
Customs and Duties Department	✓	ASAL and Mobilisation Branch Directorate Reservation / Appointment, ASAL Dispatch Transactions (Dispatch Information Inquiry), ASAL Military Service Deferment Transactions (Postponement Information Inquiry, Military Status Information Enquiry), Mobilisation Services (Vehicle Mobilisation Information Enquiry, Personnel Mobilisation Exercise Enquiry)
Security Forces Command	✓	
Map Department	✓	ASAL and Mobilisation Branch Directorate Reservation / Appointment, ASAL Dispatch Transactions (Dispatch Information Inquiry), ASAL Military Service Deferment Transactions (Postponement Information Inquiry, Military Status Information Enquiry), Mobilisation Services (Vehicle Mobilisation Information Enquiry, Personnel Mobilisation Exercise Enquiry)
Department of Animal Husbandry	✓	
Treasury and Accounting Department	✓	

Vocational School of Nursing	✓	
Civil Chamber (Attorney General's Office)	✓	
Ministry of Internal Affairs		Services Provided through e-Government Gateway (Electronic Document Management System Document Verification)
Provident Fund		Services Provided through the Institution's Website (Application for 2000TL Partial Payment from your Provident Fund Savings and Provident Fund Portal)
Department of Pharmaceuticals and Pharmacy	✓	
Department of Primary Education	✓	
Settlement Committee	✓	
Department of Settlement and Rehabilitation	✓	
Statistics Institute	✓	
Department of Geology and Mines	✓	
Development Bank	✓	
Presidency of the Public Service Commission	✓	
Department of Highways	✓	
Committee on Missing Persons	✓	
Kıbrıs Sigorta Şti. Ltd.	✓	
Kıbrıs Türk Denizcilik Ltd. Şti.	✓	Services Provided through the Institution's Website (Kıbrıs Türk Denizcilik Ltd. Buy Online Ticket)
Turkish Cypriot Electricity Authority (KIB-TEK)	✓	Services Provided through the Institution's Website (Kıb-Tek E-Payment)
Kıbrıs Türk Kıyı Emniyeti ve Gemi Kurtarma Ltd. Şti.	✓	
Kıbrıs Türk Petrolleri Ltd.	✓	
Cyprus Turkish Dairy Industry Organisation		Services Provided through the Institution's Website (E-SÜTEK Producer / Transporter / Manufacturer and E-SÜTEK Membership Application)
Kıbrıs Türk Tütün Endüstrisi Ltd.	✓	
Cyprus Turkish Investment and Development Agency (YAGA)	✓	Services Provided through the Institution's Website (Cyprus Turkish Investment Development Agency Application Form)
Kıbrıs Vakıflar Bankası Ltd.	✓	
Cyprus Foundations Administration	✓	
Cyprus Foundations Credit Company	✓	
TRNC Prime Ministry		Services Provided through e-Government Gateway (Electronic Document Management System Document Verification) and Identity Verification Services (Public Administration System)
TRNC Presidency	✓	
TRNC Courts	✓	Marriage Information Service and Identity Verification Services (Lawyer Portal)

TRNC Central Bank	✓	Services Provided through e-Government Gateway (Daily Foreign Exchange Rates) and Services Provided through the Institution's Website (Cheque Prohibitions Enquiry)
Co-operative Companies Registry	✓	
Turkish Cypriot State Theatres	✓	
K.T. Kooperatif Merkez Bankası Ltd.	✓	
Department of Culture	✓	Services Provided through the Institution's Website (Department of Culture Events)
Nicosia District Governorate	✓	
Department of Ports	✓	
Ministry of Finance	✓	Services Provided through e-Government Gateway (Electronic Document Management System Document Verification)
Finance, Inspection and Investigation Board	✓	
Central Prison	✓	
Central Tender Commission Presidency	✓	
Central Legislation Department	✓	
Vocational Technical Education Department	✓	
Department of Meteorology	✓	
National Archives and Research Department	✓	
National Education, Supervision, Evaluation and Steering Committee	✓	
Ministry of Education and Culture	✓	Identity Verification Services (MEB Information System) and Services Provided through e-Government Gateway (Electronic Document Management System Document Verification)
Immigration Department	✓	Services Provided through the Institution's Website (Residence Permits, Student Permits and Curfew Permits)
Civil Registry Office	✓	
Forestry Department	✓	
Department of Money, Foreign Exchange and Development Fund Affairs	✓	
Department of Personnel	✓	
Lotteries Unit	✓	Services Provided through e-Government Gateway (Lottery Enquiry) and Services Provided through the Institution's Website (State Lottery Enquiry)
Department of Planning and Construction	✓	
General Directorate of Police	✓	
Directorate of Police School	✓	
Postal Department	✓	Services Provided through the Institution's Website (TRNC Postal Department Mail Tracking Service)
Competition Board	✓	

Office of the Official Receiver and Registrar	✓	Identity Verification Services (E-Corporate System) and Services Provided through e-Government Gateway (Search for New Information of Commercial Company, Search for Company I Own, Search for Commercial Company Information and Search for Commercial Company)
Ministry of Health	✓	Services Provided through e-Government Gateway (Test Result, Covid-19 Test Result, Vaccination Information Inquiry and Electronic Document Management System Document Verification) and Services Provided through the Institution's Website (Tissue and Organ Transplantation / Stem Cell Donation / Organ Tissue Donation / Infectious Diseases Notification)
Department of Industry	✓	
Court of Accounts	✓	
Free Port and Zone Administration	✓	
Department of Civil Aviation	✓	Services Provided through the Institution's Website (TRNC Civil Aviation Live Flights)
Directorate of Civil Defence Organisation	✓	
Department of Social Services	✓	Services Provided through the Institution's Website (Social Services Polling)
Department of Social Insurance	✓	Services Provided through the Institution's Website (Social Insurance Department Institutional Login and Social Insurance Department Application Tracking)
Department of Sport	✓	
Water Affairs Institute	✓	
Department of Urban Planning	✓	
Şeker Sigorta Kıbrıs Ltd.	✓	
Department of Education and Training	✓	
Department of Publicity	✓	
Department of Land Registry and Cadastre	✓	
Department of Agriculture	✓	
Agricultural Research Institute	✓	
Ministry of Agriculture and Natural Resources	✓	Services Provided through e-Government Gateway (Electronic Document Management System Document Verification)
Department of Telecommunications	✓	
Department of Trade	✓	Services Provided through e-Government Gateway (Importer and Exporter Certificate Enquiry)
Department of Gender Equality	✓	
Soil Products Authority	✓	
Traffic Department	✓	Services Provided through e-Government Gateway (Vehicle Registered in My Name Enquiry)
Traffic and Transport Services Commission	✓	
Department of Tourism Planning	✓	

Department of Tourism, Promotion and Marketing	√	
Turkish Agency Cyprus (TAK)	√	
Türk Alkollü İçki ve Şarap Endüstrisi Ltd. (TAŞEL)	√	Services Provided through the Institution's Website (TAŞEL)
Anti-Drug Commission	√	
Foundations Organisation and Religious Affairs Department	√	Services Provided through the Institution's Website (Foundations Organisation and Religious Affairs Department E-Payment and Foundations Organisation and Religious Affairs Department Be a Goodness Volunteer)
Veterinary Department	√	
Department of Inpatient Treatment Institutions	√	
High Council of Publications	√	
Renewable Energy Resources Board	√	
General Secretariat of the Supreme Court	√	
Department of Higher Education and Foreign Relations	√	Services Provided through the Institution's Website (Diploma Status Enquiry and EBA Enquiry)
General Secretariat of the Supreme Electoral Council and Permanent Voter Registers Offices	√	Services Provided through e-Government Gateway (Voter Register Information)
Supreme Administrative Auditor (Ombudsman)	√	

Annex 2.
Table 2: TRNC Districts, Municipalities Affiliated to Districts and E-Services Provided by Municipalities

District	Municipality	No. Of e-Services	e-Services
Famagusta	Akdoğan Municipality	1	Services Provided through e-Government Gateway (Electronic Document Management System Document Verification)
	Beyarmudu Municipality	1	Services Provided through e-Government Gateway (Electronic Document Management System Document Verification)
	Famagusta Municipality	1	Services Provided through e-Government Gateway (Electronic Document Management System Document Verification) and Services Provided on the Website of the Institution (Debt Enquiry, City Map and City Guide)
	Geçitkale Municipality	1	Services Provided through e-Government Gateway (Electronic Document Management System Document Verification)
	İnönü Municipality	-	—
	Paşaköy Municipality	-	—
	Serdarlı Municipality	-	—
	Tatlısu Municipality	1	Services Provided through e-Government Gateway (Electronic Document Management System Document Verification)
	Vadili Municipality	-	—
	Yeniboğaziçi Municipality	-	Services Provided on the Website of the Institution (E-Municipality Services)
Kyrenia	Alsancak Municipality	1	Services Provided through e-Government Gateway (Electronic Document Management System Document Verification) and Services Provided on the Website of the Institution (E-Municipality Services)
	Çatalköy Municipality	1	Services Provided through e-Government Gateway (Electronic Document Management System Document Verification) and Services Provided on the Website of the Institution (Water Complaint Form)
	Dikmen Municipality	-	Services Provided on the Website of the Institution (Debt Enquiry)
	Esentepe Municipality	-	—
	Kyrenia Municipality	5	Services Provided through e-Government Gateway (Electronic Document Management System Document Verification), Personalised Services (Debt Information Enquiry, Water Subscriber Enquiry, Declaration Information Enquiry and Water Bill Enquiry) and Services Provided on the Website of the Institution (Debt Enquiry, Bus Stops and Cashier Transactions)
Güzelyurt	Lapta Municipality	-	—
	Güzelyurt Municipality	1	Services Provided through e-Government Gateway (Electronic Document Management System Document Verification) and Services Provided on the Website of the Institution (E-Municipality Services, Property Tax Inquiry and Water Fee Inquiry)
	Büyükkonuk Municipality	-	—
İskele	Dipkarpaz Municipality	1	Services Provided through e-Government Gateway (Electronic Document Management System Document Verification)

	İskele Municipality	1	Services Provided through e-Government Gateway (Electronic Document Management System Document Verification) and Services Provided on the Website of the Institution (Debt Enquiry and Electronic Application Forms)
	Mehmetçik Municipality	1	Services Provided through e-Government Gateway (Electronic Document Management System Document Verification) and Services Provided on the Website of the Institution (E-Municipality Forms)
Lefke	Yenierenköy Municipality	1	Services Provided through e-Government Gateway (Electronic Document Management System Document Verification)
	Lefke Municipality	1	Services Provided through e-Government Gateway (Electronic Document Management System Document Verification) and Services Provided on the Website of the Institution (E-Municipality Services)
Nicosia	Akıncılar Municipality	-	—
	Alayköy Municipality	-	Services Provided on the Website of the Institution (E-Municipality Services)
	Değirmenlik Municipality	1	Services Provided through e-Government Gateway (Electronic Document Management System Document Verification) and Services Provided on the Website of the Institution (E-Municipality Services)
	Gönyeli Municipality	1	Services Provided through e-Government Gateway (Electronic Document Management System Document Verification) and Services Provided on the Website of the Institution (Online Collection (e-Cashier))
	Nicosia Turkish Municipality	1	Services Provided through e-Government Gateway (Electronic Document Management System Document Verification) and Services Provided on the Website of the Institution (Electronic Debt Enquiry and Payment Transactions, Electronic Requests, Register / Donate / Buy Tickets, Nicosia Cemetery and Traffic Debt Enquiry)
