

# Evolution of e-Governance in the Era of the Pandemic. Will the Crisis Become an Opportunity? The Cases of Cyprus and Greece

ROSSIDIS IOANNIS<sup>1</sup>, BELIAS DIMITRIOS<sup>2</sup>

## Abstract

*The use of e-governance systems is crucial for the efficiency and effectiveness of public administrations. Despite significant steps in the integration of information technology in the previous years, Cyprus and Greece are still far from the European average. The COVID-19 pandemic forced State authorities to adopt emergency measures, aiming, among other things, to prevent the social gatherings of citizens. In this context, bold administrative reforms previously opposed during the design and implementation phase are now being attempted. Greece has progressed significantly during the pandemic, potentially setting an example for Cyprus despite the problematic integration of e-governance technologies. The purpose of this article is to present and analyse the reform efforts carried out in Greece and Cyprus during the pandemic, proceed to a comparative analysis and highlight useful conclusions for knowledge exchange between Greece and Cyprus. The present study discusses the prospect of transforming the pandemic crisis into an opportunity for administrative upgrading.*

**Keywords:** e-governance, public administration, pandemic crisis, Greece, Cyprus

## Introduction

The ever-changing socio-economic conditions combined with the strong impact of globalisation have made it necessary to move to a more efficient and effective type of public administration to be able to meet the high demands of citizens and businesses. Public administration, under the influence of modern management models such as New Public Management (NPM) and Public Governance, acquires a more operational approach by setting the fulfilment of high administrative performance as a key goal. E-governance has been a crucial tool for the development of public

---

<sup>1</sup> Adjunct Lecturer, School of Law, University of Nicosia.

<sup>2</sup> Assistant Professor, Department of Business Administration, University of Thessaly.

administration.<sup>3</sup> The contribution of e-governance has led to the significant improvement of the operation of public services, which enjoys multifaceted benefits.<sup>4</sup>

In this context, the administrations of public bodies at the international level have focused on digital reforms by introducing information technologies in the public sector and achieving a significantly higher performance than in previous years. The implementation of e-governance has also been a key goal for the European Union (EU), pushing Member States to make the most of digital systems with a view to administrative convergence that would bring the prospect of European integration closer.

Being at the bottom of the European rankings, Cyprus and Greece are still far from the European average, although they have shown significant steps in the integration of information technologies in recent years. Successful examples of European countries (e.g. Nordic countries) could be regarded, under certain conditions, as promising practices enabling the transfer of significant know-how to Greece and Cyprus. However, one should bear in mind that peculiarities of administrative systems (structure, infrastructure, culture, technological level, etc.) are responsible, to a large extent, for rendering efforts of simply copying technological or administrative tools effective.

The era of the pandemic presents us with a field of special administrative analysis for the process of integration of information technologies. The arrival of COVID-19 forced State authorities to take emergency measures to deal with the transmission of the virus, aiming, among other things, at the prevention of the social gatherings of citizens. In this context, bold administrative reforms which have faced significant obstacles during the design and implementation phase so far, were nevertheless attempted. A notable case is the case of Greece, which, despite the problematic integration of e-governance technologies so far, made leaps and bounds during the pandemic crisis. In recent months, there has been an intensive implementation of information technologies in the Greek public sector, constituting an example for other countries such as Cyprus. This article will present and analyse the digital reform projects carried out in Greece and Cyprus during the pandemic. Through a comparative analysis, useful conclusions for the exchange of know-how between

---

<sup>3</sup> Organisation for Economic Co-operation and Development (OECD), *Digital Government Strategies for Transforming Public Services in Welfare Areas* (2016), available at <https://www.oecd.org/gov/digital-government/Digital-Government-Strategies-Welfare-Service.pdf> (last accessed 11 July 2021).

<sup>4</sup> Yu-Che Chen, *Managing Digital Governance: Issues, Challenges, and Solutions* (New York: Routledge, 2017).

Greece and Cyprus will be highlighted. The study examines the prospect of transforming the problems arising from the pandemic crisis into an opportunity for administrative upgrading.

### **Overcoming the Vemberian Model**

The concept of bureaucracy was first introduced by Max Weber and refers to the most common form of organisation ‘characterized by centralism, hierarchy, power, discipline, rules, career, employment, tenure’.<sup>5</sup> For many years, the Vemberian model has been associated with public administration, constituting an administrative phenomenon of historical but ambiguous significance. The economic, administrative, and socio-political changes of the last decades have led to the revision of the function of public bureaucracy with a focus on increasing the efficiency of the public sector and its overall ability to respond to its emerging role.<sup>6</sup>

The need for administrative reforms has now been established in Greece and Cyprus. Public management, NPM, and public governance are increasingly being used, expressing itself more as an institutional development rather than an abstract or theoretical development. There is a gradual transition from public administration to public management. A series of increasingly noticeable pathogens has led to the creation of the new model of public sector administration. In particular, the existence of an outdated, bureaucratic, and inefficient type of public administration combined with the technological boom and globalisation of the economy, as well as the growing demands of consumers/citizens for better services, led to the consolidation of more managerial approaches.<sup>7</sup> Modern management trends, in fact, anticipate a flexible management process based on the effective management of material and intangible resources, which aims to achieve predetermined goals while being more in line with the day-to-day operation of organisations without excluding the willingness to define and implement a long-term strategy.<sup>8</sup> The new management approach has consolidated a differentiated way for the operation of the public sector, which places emphasis on achieving a high level of efficiency. In this regard, the top priority has been the utilisation of modern information technologies which can

---

<sup>5</sup> Ewan Ferlie, Laurence E. Lynn Jr., Christopher Pollitt, *The Oxford Handbook of Public Management* (New York: Oxford University Press, 2011) 33-76.

<sup>6</sup> Sandford Borins, ‘The New Public Management is Here to Stay’ (1995) 38(1) *Canadian Public Administration*.

<sup>7</sup> Ibid.

<sup>8</sup> Ferlie, Lynn Jr., Pollitt (no 4).

contribute to the fulfilment of the goals for increased efficiency.<sup>9</sup> The emergence of e-governance is the modern reality of public administrations.<sup>10</sup>

### Concept and Characteristics of E-Governance

The perpetual integration of Information and Communications Technology (ICT) in every aspect of daily life has marked a new political and socio-economic reality, called the 'Information Society'.<sup>11</sup> However, e-governance is not limited to the integration of ICT in public administration to automate processes, but rather supports the entire life cycle of public policies, from identifying social needs and planning solutions to implementing and evaluating results. E-governance refers to the use of information and telecommunications technologies in public administration in combination with organisational changes and new staff skills that seek to improve public service, strengthen democracy, and support public policies.<sup>12</sup> The main goals of e-governance are the modernisation of the State and the creation of a new form of 'e-governance', the development of a 'networked' civil society, the provision of comprehensive e-services, and also the strengthening of democratic processes by forming a digital participatory democracy.<sup>13</sup>

Thus, e-governance looks forward to the democratisation of institutions, promoting the principles of equality and meritocracy within a vehicle of free information, equal access, and active participation of citizens in shaping public policies.<sup>14</sup> Meanwhile, it advocates the values of economy, efficiency, and effectiveness of public actions.<sup>15</sup> In addition, the values of the implementation of procedures and im-

---

<sup>9</sup> Chen (no 3).

<sup>10</sup> OECD (no 2).

<sup>11</sup> Ioannis Apostolakis, 'Critical Issues in the Path to e-Governance and Governance: State Interventions and Civil Society' (2005), available at: [http://www.pspa.uoa.gr/fileadmin/pspa.uoa.gr/uploads/Research/EDE/Conferences/SDE\\_2005/Proposals/Apostolakis\\_Ioannis.pdf](http://www.pspa.uoa.gr/fileadmin/pspa.uoa.gr/uploads/Research/EDE/Conferences/SDE_2005/Proposals/Apostolakis_Ioannis.pdf) (in Greek) (last accessed 11 July 2021)

<sup>12</sup> Ioannis Apostolakis, Euripides Loukis, Ioannis Halaris, *Electronic Public Administration: Organisation, Technology and Applications (Ηλεκτρονική Δημόσια Διοίκηση: Οργάνωση, Τεχνολογία και Εφαρμογές)* (Athens: Papazisis, 2008) 59 (in Greek).

<sup>13</sup> OECD (no 2) 12.

<sup>14</sup> Stella Ladi, 'Citizens' Participation in Public Policy: From Theory to Practice (Συμμετοχή των Πολιτών στη Δημόσια Πολιτική: Από τη Θεωρία στην Πράξη)' (2010) 24 *Science and Society*, 79-98, available at <https://ejournals.epublishing.ekt.gr/index.php/sas/article/viewFile/904/927.pdf> (last accessed 11 July 2021) (in Greek).

<sup>15</sup> Maria Rammata, *Contemporary Greek Public Administration: Between Bureaucracy and Management (Σύγχρονη Ελληνική Δημόσια Διοίκηση: Ανάμεσα στη Γραφειοκρατία και το Μάνατζμεντ)* (Athens: Kritiki publications, 2011) 41 (in Greek).

partiality are promoted.<sup>16</sup> Moreover, the principle of legality, which refers to public administration actions governed by the principles and rules of law,<sup>17</sup> is extended to include the values of transparency, control, accountability and public debate.<sup>18</sup> It is now clear that e-governance is an essential tool embracing the dimension of support towards internal operations and the communication of public administration with its external environment, the dimension of e-services and commerce for businesses and citizens, as well as the burdensome dimension of e-democracy.<sup>19</sup>

The implementation of e-governance requires significant and sometimes radical reform of the organisational structures and procedures of public organisations,<sup>20</sup> during which some basic principles must be taken into account, as those are reflected in the ‘EU action plan on e-governance 2016-2020’:<sup>21</sup>

1. the ‘by definition digital character’ principle, which recognizes the need to establish the services provided primarily through digital means;
2. the ‘only once principle’, which ensures that the same information is submitted to the public administration by citizens and businesses only once (avoidance of digital bureaucracy);
3. the ‘blocking and accessibility’ principle to avoid digital divide;
4. the ‘open character and transparency’ principle with the ability to monitor and control public actions by civil society;
5. the definite cross-border character’ principle for the smooth development of European Public Administration and the single market;
6. the ‘by definition interoperable’ principle for the continuous exchange of information, data and services and;
7. the ‘reliability and security’ principle, which includes all necessary measures for digital data security and privacy protection.

---

<sup>16</sup> Nikolaos Barbas, *Elements of Fiscal Law (Στοιχεία Δημοσιονομικού Δικαίου)* (Athens-Thessaloniki: Sakkoula, 2018) 97 (in Greek).

<sup>17</sup> Epaminondas Spiliotopoulos, *Handbook of Administrative Law (Εγχειρίδιο Διοικητικού Δικαίου)* (15th edn, Athens: Law Library, 2017) 76 (in Greek).

<sup>18</sup> Panagiotis Karkatsoulis, ‘Governance as a Content and Decision-Making Process for Public Affairs’ (‘Η Διακυβέρνηση ως Περιεχόμενο και Διαδικασία Λήψης Απόφασης για τις Δημόσιες Υποθέσεις’) (2001) 7 *Science and Society*, 208-209, available at [https://www.researchgate.net/publication/283780816\\_E\\_diakybernese\\_os\\_periechomeno\\_kai\\_diadikasia\\_lepses\\_apophases\\_gia\\_tis\\_demosies\\_ypotheseis](https://www.researchgate.net/publication/283780816_E_diakybernese_os_periechomeno_kai_diadikasia_lepses_apophases_gia_tis_demosies_ypotheseis) (last accessed 11 July 2021) (in Greek).

<sup>19</sup> Apostolakis, Loukis, Halaris (no 11) 28.

<sup>20</sup> *Ibid.* 27.

<sup>21</sup> EU action plan on e-governance 2016-2020, available at <https://ec.europa.eu/digital-single-market/en/european-egovernment-action-plan-2016-2020> (last accessed 11 July 2021).

Utilising the potential of e-governance in public administration is a time-consuming, laborious, and dynamic process, which is constantly evolving and requires the fulfilment of many conditions. The provision of public electronic services is graded according to their level of digital integration, which is also the quality of their evaluation scale. Levels of digital integration of the public sector can be summarized in simple information (e.g. information sites), interaction (e.g. providing standard forms), two-way interaction (e.g. electronic request forms), electronic transaction (e.g. online processing of requests) and the personalised service, which refers to the automated and preventive provision of services (proactive service delivery).<sup>22</sup>

The multidimensional and interdependent benefits that result from the integration of e-governance in public administration refer both to the administration itself, citizens, and businesses, as well as to society and public life in general.<sup>23</sup> The most important benefits include the seamless dissemination of organised, easily accessible and user-friendly unified quality government information.<sup>24</sup> The use of ICT and the computerisation of administrative procedures and functions bring flexibility, reduce the cost of processing work, speed up procedures, reduce bureaucracy, save resources, offer more complete control, and eliminate the obligation to provide a large number of legal and other documents.<sup>25</sup> At the same time, the interconnection of information systems and the interoperability between public bodies enhance the efficiency of public bodies, which results in the direct increase of the trust and satisfaction of businesses and citizens, who can now carry out a large number of transactions on a 24-hour basis and without geographical restrictions.<sup>26</sup>

<sup>22</sup> Michael Paraskevas, Georgios Asimakopoulos, Vasilios Triantafyllou, *Information Society: Infrastructure, Services, and Impacts (Κοινωνία της Πληροφορίας: Υποδομές, Υπηρεσίες και Επιπτώσεις)* (Athens: SEAB, 2015) 1-2 (in Greek).

<sup>23</sup> Chen (No 3).

<sup>24</sup> Athanasios Vassilopoulos, 'E-Governance in Greece' ('Η Ηλεκτρονική Διακυβέρνηση στην Ελλάδα') (2016), available at [https://www.academia.edu/30423917/E\\_Governance\\_in\\_Greece\\_%CE%97%CE%BB%CE%B5%CE%BA%CF%84%CF%81%CE%BF%CE%BD%CE%B9%CE%BA%CE%AE\\_%CE%94%CE%B9%CE%B1%CE%BA%CF%85%CE%B2%CE%AD%CF%81%CE%BD%CE%B7%CF%83%CE%B7\\_%CF%83%CF%84%CE%B7%CE%BD\\_%CE%95%CE%BB%CE%B-B%CE%AC%CE%B4%CE%B1\\_Athanasios\\_Vasilopoulos\\_Gr\\_](https://www.academia.edu/30423917/E_Governance_in_Greece_%CE%97%CE%BB%CE%B5%CE%BA%CF%84%CF%81%CE%BF%CE%BD%CE%B9%CE%BA%CE%AE_%CE%94%CE%B9%CE%B1%CE%BA%CF%85%CE%B2%CE%AD%CF%81%CE%BD%CE%B7%CF%83%CE%B7_%CF%83%CF%84%CE%B7%CE%BD_%CE%95%CE%BB%CE%B-B%CE%AC%CE%B4%CE%B1_Athanasios_Vasilopoulos_Gr_) (last accessed 11 July 2021) (in Greek).

<sup>25</sup> Diomidis Spinellis et al., 'E-Governance in Greece: Successes, Problems and the Road to Digital Transformation' ('Ηλεκτρονική Διακυβέρνηση στην Ελλάδα: Επιτυχίες, Προβλήματα και ο Δρόμος προς τον Ψηφιακό Μετασχηματισμό') (Athens: DIANEosis Research and Analysis Organization, 2018) 79, available at [https://www.dianeosis.org/wp-content/uploads/2018/03/EGov\\_Upd\\_090318.pdf](https://www.dianeosis.org/wp-content/uploads/2018/03/EGov_Upd_090318.pdf) (last accessed 11 July 2021) (in Greek).

<sup>26</sup> Apostolakis, Loukis, Halaris (no 11) 53-57.

A key advantage of e-governance is the strengthening of cooperation at a national and supranational level, leading to enhanced competitiveness, innovation and entrepreneurship, and promoting sustainable development and better utilisation of national resources. Equal access of citizens to information flows and increased opportunities for audits promote transparency, accountability, extroversion, and overt action of the administration, leading to the elimination of corruption and mismanagement.<sup>27</sup> Encouraging the participation and involvement of citizens in the formulation of public policies using ICT and the internet<sup>28</sup> (e.g. electronic consultations, voting) is an investment in the democratisation of institutions and the defence of the public interest, and also contributes to the development of a politico-central and more democratic government.<sup>29</sup>

However, the benefits from the integration of e-governance in public administration are poorly assessed without a corresponding drastic redesign of organisational structures and procedures.<sup>30</sup> The difficulties of e-governance also include issues of compatibility, accessibility, usability, feedback, interoperability, and technological level mismatch between the stakeholders, as well as issues of security, legality, trust, and personal data protection.<sup>31</sup> According to Gupta et al. (2019), the most common barriers are the following:<sup>32</sup>

1. lack of inter- and intra-organizational collaboration,
2. lack of feedback-based learning loops,
3. lack of citizen engagement,
4. lack of top management commitment,
5. lack of political will,
6. resistance to change,
7. lack of trust on e-governance,
8. lack of clarity about roles and responsibilities,

---

<sup>27</sup> Vassilopoulos (no 22).

<sup>28</sup> Vasos Georgiou, *Public Administration in Cyprus: Administrative Law, Jurisprudence, and Introduction to Management Science (Η Δημόσια Διοίκηση στην Κύπρο: Διοικητικό Δίκαιο, Νομολογία και Εισαγωγή στη Διοικητική Επιστήμη)* (Nicosia: En Typois, 2012) 148 (in Greek).

<sup>29</sup> Ladi (no 13) 83-84.

<sup>30</sup> OECD (no 2).

<sup>31</sup> Apostolakis (no 10) 50.

<sup>32</sup> Anchal Gupta, Pradeep Kumar Suri, Rajesh Kumar Singh, 'Analyzing the Interaction of Barriers in E-Governance Implementation for Effective Service Quality: Interpretive Structural Modeling Approach' (2019) 7(1) *Business Perspectives and Research* 59–75, available at <https://journals.sagepub.com/doi/pdf/10.1177/2278533718800562> (last accessed 11 July 2021).

9. inadequate planning for project sustainability,
10. unrealistic time frames for implementation,
11. rigid process in government system,
12. inadequate infrastructure,
13. ignorance of stakeholders' concerns,
14. insufficient requirement analysis.

A critical turning point is the lack of specialisation and training of the human resources in public administration, where the culture of the latter regards the predisposition to resist impending changes, while the issue that needs to be addressed is the so-called 'digital divide', which expresses the digital divide and differentiated familiarity of citizens vis-à-vis technology.<sup>33</sup> Finally, there is difficulty in integrating e-governance into the legal framework, while the commitment and targeting of the current political and administrative leadership, as well as the provision of the necessary funding for the creation of strong information systems, are additional issues to be explored and resolved.<sup>34</sup>

### **E-Governance in Greece**

E-governance has been a particularly important target of the Greek public administration, which has been trying - through the introduction of information technologies— to upgrade the operation of the public sector by significantly improving the levels of efficiency and effectiveness. The coordinated institutional efforts to introduce e-governance in Greece have been carried out through a series of action programs over the last 30 years.

The first action plan for e-governance was the 'Kleisthenis' program, within the framework of the second Community Support Framework (CSF). According to this program, new technologies were introduced in the services of the municipalities as well as in other services. Between 1994 and 1999, public services were provided with computers, software, and network infrastructure. In 1998, the 'quality for the citizen' program was adopted, incorporating four areas of action: a) structures, b) operation, c) human resources and d) new technologies. In 1999, the Ministry of Finance established its operational program, 'Information Society', which strengthened the infrastructure and ICT services in the main sectors of public administration, health, and education, as well as the general total of the IA's transactions with

---

<sup>33</sup> Vassilopoulos (no 23) 10.

<sup>34</sup> Apostolakis, Loukis, Halaris (no 11) 35-36.



citizens and businesses. In 2000, the State program was implemented, offering the directions for the necessary reforms in public administration with the inherent primary goal of serving the citizen. The programs implemented within the framework of the 2nd CSF are the following:

1. 'Kleisthenis', 1994-1999: with emphasis, as already mentioned, on the network infrastructure but also on the education and training of civil servants;
2. "Politeia": with emphasis on the directions of continuous reform in public administration. The program is supplemented and completed with various operational programs;
3. 'Syzefxis': the development of a single internal network infrastructure that enables the communication of public services with citizens and businesses, as well as with each other;
4. 'Ariandi': this program includes actions related to
  - a) a system that gives access to information of public administration through call centres;
  - b) the interconnection of local authorities;
  - c) the implementation of a system for receiving and processing requests, positions and opinions of citizens to enhance their participation in the public sphere;
  - d) the development of a portal for citizens;
  - e) the reorganisation of licensing and certification procedures.

In addition to the above programs, individual actions are carried out by various organisations to primarily meet their daily needs:

1. the development of information system of taxation and customs by the Ministry of Finance,
2. a system for the modernisation of the Greek Police by the Ministry of Public Order information,
3. the upgrade of the justice system and detention systems by the Ministry of Justice,
4. the development of a high-precision numerical model for the weather forecast, by the Ministry of National Defence
5. the modernisation of the former Social Insurance Institute through the development of an information system in information and transaction services.

In addition, programs were also funded with the aim of upgrading the local government with the following main actions:

- a) electronic voting on local issues,
- b) actions for the protection of the environment,
- c) online discussions on local issues,
- d) local portals with electronic services for the issuance of certificates, licenses, and certificates,
- e) electronic services for transport management.

Equally important actions were implemented within the framework of the 3rd CSF, such as:

- a) the strengthening of e-governance programs,
- b) support for the management of Structural Fund resources and the changeover to the euro currency,
- c) regional geographic information systems and innovative actions,
- d) training of human resources and modernisation of the administration,
- e) information and communication technology in the fields of Health and Welfare,
- f) smart and intelligent transport,
- g) data infrastructure and information technology for the land registry.

In recent years, the actions of ICT and e-governance in Greece were funded by the programs of the European Structural Funds and implemented through the 3rd CSF (2000-2006) and the National Strategic Reference Framework (2007-2013). Until 2013, the implementation of information technologies in the Greek public administration had been very limited. Public administration includes features of complexity, low efficiency, limited technological infrastructures, shortcomings in computerisation and a small percentage for ICT.

Despite the recognition of e-governance as a high-priority goal for the Greek public administration, the results were not as anticipated. The Greek e-governance presents fragmentary and incomplete implementation of digital systems, technological level mismatch between public bodies, poor interoperability, and dysfunction in the implementation of planned strategic actions.<sup>35</sup> In fact, the National Digital Strategy 2006-2013 identifies as roots of the above problems and distortions the following:<sup>36</sup>

---

<sup>35</sup> Ibid. 428.

<sup>36</sup> Ibid. 385-386.

1. non-dynamic utilisation of ICT by the Greek State,
2. small impact of existing ICT on business productivity,
3. lack of strategy,
4. small number of available e-governance services,
5. low priority for ICT by Greek governments,
6. limited information on the benefits of e-governance projects,
7. inadequate ICT education in schools and limited lifelong learning,
8. absence of practical reasons for the use of the internet by the citizens,
9. high prices for broadband access,
10. lack of interoperability between public bodies and their electronic services,
11. introversion of public organisations in the integration of new technologies,
12. inability to develop e-services in areas critical to the quality of life of citizens (e.g. health).

Despite the realisation of the imperative necessity to adopt e-governance mechanisms, the integration of successful electronic applications is assessed as meagre, with few exceptions such as the Hellenic Online Tax System (TAXIS) of the General Secretariat of Information Systems (GIS), the Service Centres and the Citizens' Service Centres (DIAVGEIA).

During the period 2014-2020, the Greek public administration placed greater emphasis on the integration of e-governance elements. Through the introduction of more information technologies perceiving them as tools of contemporary governance, public administration aimed to improve its administrative performance. Nevertheless, the Greek public sector was called upon to face several complex challenges. To address them effectively, it chose to focus on six key pillars of administrative reform that will be the cornerstone for its future:

1. creation of a uniform and coordinated public sector,
2. focus of public administration on the needs of citizens and businesses, the provision of efficient services, the modernisation of structures and the simplification of procedures,
3. empowerment of human resources,
4. empowerment of senior executives to achieve higher performance,
5. further development of the existing culture to achieve better results,
6. design of flexible processes and capabilities to drive future reforms with long-term benefits.

In the strategy of the period 2014-2020, we can distinguish three main directions:

1. The first concerns the modernisation of the State and the administration mainly through the simplification of the procedures and the electronic management of documents, as well as the unified management of the resources available to public administration.
2. The second concerns the reconnection of the public sector with the citizen, mainly by creating a single point of access to public services and the unified management of State-citizen-business relations.
3. The third concerns the coordination of ICT policies in the public sector by linking its basic registers with open public information.

Greece has shown significant progress in integrating e-governance systems into the operation of the public sector.<sup>37</sup> Nevertheless, the reform project presents several difficulties and is evolving at a very slow pace.<sup>38</sup> Difficulties include a lack of long-term vision, gaps between digital strategy and action plan, a lack of a strategic implementation plan, a lack of continuity of government declarations and programs,<sup>39</sup> a lack of results, increased bureaucracy, a vast legislative framework, the financing of projects without proper maintenance, the discontinuity and fragmentation of applications, the existing culture of human resources and its inadequate training, as well as the absence of a central government.<sup>40</sup>

## E-Governance in Cyprus

By responding to the demands of contemporary administration as well as to European requirements, Cyprus has in recent years adopted a wide range of digital reforms aiming at introducing e-governance systems in the Cypriot public administration. A key area of reform is the 2014-2020 strategy, which presents as its main goal the provision of as many public services as possible in electronic form to serve citizens

---

<sup>37</sup> Panagiotis G. Maistros, *The Three Waves of Public Administration Reforms in Greece [1975-2015 +]* (*Τα Τρία Κύματα Μεταρρυθμίσεων της Δημόσιας Διοίκησης στην Ελλάδα [1975-2015+]*) (Athens: Papazisis, 2009) (in Greek).

<sup>38</sup> Spinellis et al. (no 24) 125.

<sup>39</sup> Thodoris Tsekos, 'European Rhythms and Greek Ways: The (Uncertain) Greek Course Towards the (Unclear) European Administrative Space (Ευρωπαϊκοί Ρυθμοί και Ελληνικοί Τρόποι: Η (Αβέβαιη) Ελληνική Πορεία προς τον (Ασαφή) Ευρωπαϊκό Διοικητικό Χώρο)' in Argyris Passas, Thodoris Tsekos (eds) *National Administration and European Integration: The Greek Experience* (Athens: Papazisi, 2008) 135 (in Greek).

<sup>40</sup> Spinellis (no 24) 105-116.

and businesses digitally in all aspects of their cooperation with the public sector. Particular emphasis has been placed on services, work, health, and education.

The digital strategy 2014-2020 is an action plan that aims at the effective use of ICT in all sectors of the economy and society. According to the text of the digital strategy, which has been posted on the website of the State Department of Electronic Communications, 'in a country where most of the economy is based on services, the digital strategy will help to improve and upgrade these services'. Cyprus, which aims to be a regional centre in the provision of services in sectors such as health, education, and tourism, and which wishes to attract investment in these sectors, can improve and upgrade the services offered through the use of ICT.

In the context of realising the vision for the creation of a digital society, an important part of the digital strategy is covered by the goal of creating an integrated — and non-fragmented— digital public service where all public services are available in electronic form. Essentially, the creation of e-governance is a measure to achieve the overall goal of the digital strategy of Cyprus related to the modernisation of public administration. The implementation of e-governance contributes to the realisation of the broader goal of the restructuring of the public service, so that public services 'are simple, understandable and attractive to citizens, that is to focus on the citizen, moving away from one-size-fits-all and moving towards more personalized solutions, while allowing interactivity and transaction between Government Services and citizens / businesses'. The publication of the digital strategy of Cyprus also points out that 'the provision of public electronic services must simplify the procedures and create a favourable climate for the promotion of investments in various sectors of the economy while the design and implementation of public services must take into account vulnerable groups'<sup>41</sup>.

The main objectives of the digital strategy 2014-2020 include the following:

1. increasing Internet speed at affordable prices and satisfactory quality;
2. modernising the public sector and increasing the available public electronic services;
3. strengthening digital entrepreneurship;
4. promoting of digital skills.

---

<sup>41</sup> European Commission, Digital Economy and Society Index - Cyprus (2020), available at [https://ec.europa.eu/cyprus/sites/default/files/13\\_desi\\_2020\\_-\\_cyprus\\_-\\_el.pdf](https://ec.europa.eu/cyprus/sites/default/files/13_desi_2020_-_cyprus_-_el.pdf) (last accessed 11 July 2021).

The application of the Tax Department electronic service, TaxisNet, is an extremely important e-governance program, which offers the possibility of electronic submission of tax returns of both VAT, and Income Tax.<sup>42</sup> The implementation of the TaxisNet service contributed, on the one hand, to the significant improvement of the inefficiency of the tax administration and, on the other, to the better service of the citizens.

A particularly important reform project is the Government Gateway Portal (Ariadni). Ariadni, which is part of the infrastructure projects for the implementation of e-governance, is the central gateway to government IT systems and provides secure access to information for integrated cross-border purposes, requiring data from one and/or more systems.<sup>43</sup> Ariadni is essentially an infrastructure on which the electronic services made available by the government of Cyprus are built; an online platform that allows users to access public services offered online by visiting a single web portal.

An important e-governance system is the Government Data Warehouse which was completed in 2015. It is a database in which data from various government information systems are stored 'depending on the business questions that arise'.<sup>44</sup> In this way, the competent bodies can analyse, evaluate and utilise this data and come to strategic decisions regarding the improvement of the quality of the provided public services.

Overall, the Cypriot public administration has been significantly upgraded in recent years thanks to the addition of many and very important e-governance projects, such as the e-Justice Project, the implementation of an Integrated Health Information System, the Electronic Office Information Office (e-OASIS) project, the Laboratory Information Management System (LIMS) Project of the State Chemistry, the Platform for the enterprises of the Ministry of Energy, Trade, Industry and Tourism, which concerns the upgrading of the Unified Service Centre, etc.

---

<sup>42</sup> Tax Department, TAXISnet Service, available at: <https://taxisnet.mof.gov.cy/login.jsp> (last accessed 11 July 2021).

<sup>43</sup> Ariadni, available at <https://eservices.cyprus.gov.cy/EL/Pages/Home.aspx> (last accessed 11 July 2021).

<sup>44</sup> Government Data Warehouse (GDW), available at <https://joinup.ec.europa.eu/collection/cyprus-government-initiatives/solution/government-data-warehouse/about> (last accessed 11 July 2021).

As part of the growing effort to integrate e-governance systems, the Ministry of Research, Innovation and Digital Policy has announced that it plans to implement the following e-governance programs and actions in the period 2020-2025:<sup>45</sup>

1. the Enterprise Resource Planning System (ERP),
2. the evolution of e-OASIS Office Automation System,
3. the Central Antivirus System,
4. the Government Consolidated Network (KED),
5. the expansion of the Government Information Warehouse,
6. the creation of a Data Centre,
7. Priority Series Information System for the Citizens Service Centre (CSC),
8. a new information system for the Customs Department,
9. a new Integrated Information System of the Road Transport Department,
10. the LIMS program for the State Chemist,
11. e-Patient Folders,
12. the full digitisation for the Companies Registrar and Official Receiver Department,
13. a new Information System for the Department of Taxation,
14. the Land Information System of the Department of Lands and Surveys,
15. the Integrated Information System "Ippodamos" for the Department of Urban Planning and Housing,
16. an Integrated Fisheries Management System for the Department of Fisheries and Marine Research,
17. an Exchange Point Automation System for the Postal Services Department,
18. a new National Visa Information System for the Ministry of Foreign Affairs (MFA)
19. a Support Services System for the Ministry of Education, Culture, Sports and Youth,
20. an Electronic Justice system,
21. an Integrated Health Information System.

Nevertheless, as in the case of Greece, despite the significant steps to develop e-governance, the Cypriot public administration is still lagging behind European

---

<sup>45</sup> Deputy Ministry of Research, Innovation and Digital Policy, available at <https://www.dmid.gov.cy> (last accessed 11 July 2021).

requirements, which leaves significant room for improvement. Some of these could be identified as follows:

1. the extension of e-OASIS to all Departments/Services of the public sector;
2. online processing of all payments to the government (e-payment);
3. incentives for citizens to use the available electronic services of the public sector;
4. the identification of basic services that cannot be offered completely electronically due to the existing legislation, and the amendment of these laws so that these public services can also be provided electronically;
5. the development of more electronic services based on the needs of citizens/businesses;
6. ensuring social inclusion so that services can be accessed and used by all categories of users, including vulnerable groups;
7. enabling citizens' access to their personal data, which they need in transactions with government agencies, and ensuring that the submission of such information by the citizen will take place only once.
8. the public (Internet) provision of information (laws, regulations, financial data, etc.) which is in the possession of the State.
9. the development of tools that support participatory decisions and enable the participation of the citizen in the decision-making of the State.
10. the review of public-sector procedures for effective e-governance.

### **E-Governance in Cyprus and Greece in comparison to the EU**

Although Greece and Cyprus have shown significant progress in the integration of e-governance systems in recent years, they are still quite far from the European average, as they are at the bottom of the European ranking according to the Digital Economy and Society Index (DESI), where Greece ranked 27<sup>th</sup> and Cyprus ranked 24<sup>th</sup> under 'Integration of Digital Public Services' among the 28 EU Member States. In other words, they have a long way to go to meet European requirements and the current needs of citizens and businesses. The DESI is a complex index resulting from the synthesis of five sub-indices:<sup>46</sup>

1. connectivity: availability of broadband networks, internet connection prices,

---

<sup>46</sup> European Commission, 'The Digital Economy and Society Index (DESI)', available at <https://ec.europa.eu/digital-single-market/en/desi> (last accessed 11 July 2021).



2. human capital: digital skills of citizens and the workforce,
3. Internet use: use of electronic services by citizens,
4. digital technology integration: business integration of new technologies, e-commerce development,
5. integration of digital public services: integration of new technologies by the public sector, development of e-governance.

The following figures show the position of Greece and Cyprus in relation to the European ranking based on the DESI.

Figure 1: DESI Ranking of Greece and Cyprus<sup>47</sup>

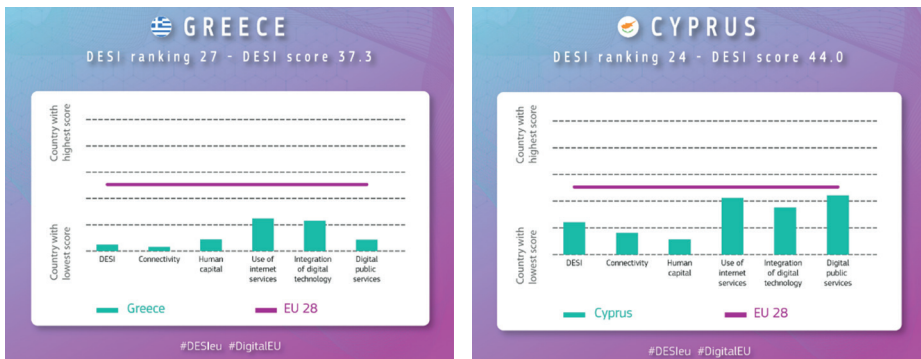
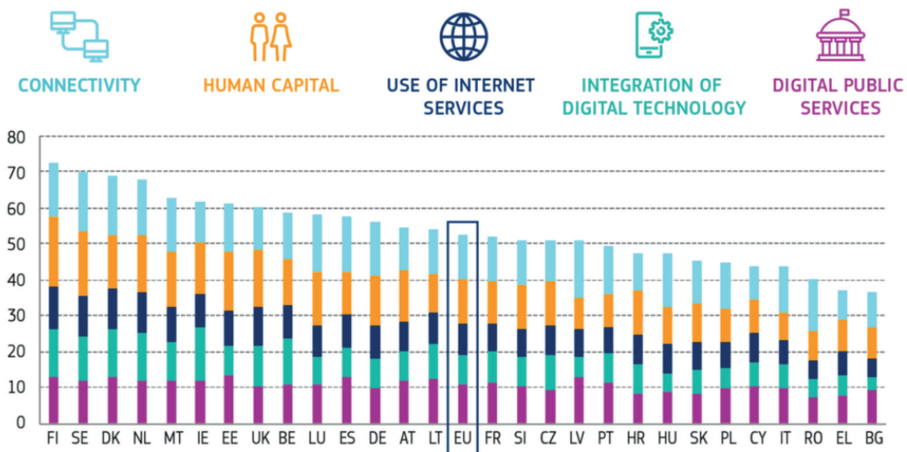


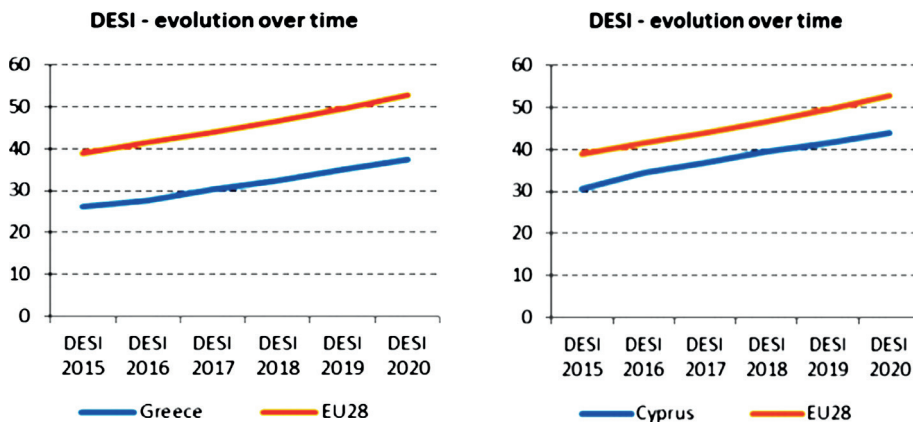
Figure 2: European Ranking of the DESI<sup>48</sup> (2020)



<sup>47</sup> Ibid.

<sup>48</sup> Ibid.

Figure 3: DESI evolution of Greece and Cyprus over time <sup>49</sup>



The ranking of Europe in the DESI 2020 makes it clear that both Greece and Cyprus should intensify their efforts to approach the European average by substantially upgrading the level of their electronic public services. At this point, of course, the effort made in recent years to significantly improve the level of digital services compared to the past must be emphasized. Prima facie, the course of Greece and Cyprus from 2015 to 2020, highlights the progress made and forms an optimistic assessment of their future development.

Nevertheless, carrying out a more thorough analysis of each element of the DESI indices for Greece and Cyprus, some common features are identified, causing concern. Particularly:

- Low digital skills of human resources are observed (a significant percentage of the population has never used the internet), lagging significantly behind in digital skills compared to the corresponding EU average.
- In terms of internet use, Greece and Cyprus fall far behind (although in individual activities, such as access to information, entertainment, social networks, games and the use of communication, performance is good) the EU MoD, particularly in the fields of electronic transactions and online transactions.
- Regarding the use of digital technology by companies, the percentage of sales of companies through e-commerce is small, electronic documents

<sup>49</sup> Ibid.

have limited use and few companies use modern technologies of production organisation.

- As for the digital services of the public sector, integrated services to citizens, businesses and other public services are far from ideal.

### **Greece and Cyprus in the Time of the Pandemic**

From the beginning of 2020, the dangerous coronavirus spread to the EU and gradually to both Greece and Cyprus as well. SARS is a highly contagious virus. It spreads mainly through person-to-person contact, while the infections range from mild to deadly. The rapid spread of the virus has led to immediate adaptations in much of the socio-political life of each country. This situation has demonstrated the importance of digital resources for our economies and how networks and connectivity, data, artificial intelligence, and supercomputers, as well as basic and advanced digital skills, support our economies and societies, making it possible to continue work, monitor the spread of the virus and speed up research on drugs and vaccines<sup>50</sup>

In this context, and to avoid public gatherings by observing quarantine conditions imposed by the extraordinary measures taken by the governments, special emphasis was placed on the adaptation of public administration to the new circumstances. These conditions - which highlight the imperative need for reform of the administrative function - have led to the intensification of the efforts to introduce e-governance systems in Greece and Cyprus, while overcoming obstacles that have hindered important areas of digital reform for years at the same time (e.g. citizens and employees' reactions, low level of government priority, lack of funding, etc.). Within a short period of time the Greek government reviewed and accelerated its plans to take appropriate action and offer the citizens a range of digital services.

### **E-Governance Reforms in Greece in the Era of COVID-19**

During the pandemic, Greece undertook a large number of e-governance reforms, significantly improving the effectiveness of its actions by introducing key changes in e-governance systems. Due to the high degree of necessity, many digital projects, such as digital service platforms, have been implemented to achieve remote citizen service, while legislative and regulatory initiatives have been taken and appropriate

---

<sup>50</sup> European Commission, 'Cyprus in the Digital Economy and Society Index', available at <https://digital-strategy.ec.europa.eu/en/policies/desi-cyprus> (last accessed 11 July 2021).

guidelines have been provided to ensure digital processing. The Ministry of Digital Governance implemented and began the operation of the single portal of the State, namely gov.gr. Through the gov.gr portal, the citizen gained access to more than 500 digital services—including the electronic processing of authorisations—avoiding relocation and significantly reducing bureaucracy.

Legislative Act 4635/2019 regulated the process of citizen access to the single portal, allowed the issuance of certificates and included, inter alia, the following regulations regarding the necessary measures to deal with the pandemic:

1. issuance of documents through gov.gr; every natural person has now the ability to issue documents, which will be accepted by all public bodies as well as by other natural or legal persons, individually or on behalf of a third party (as a legal representative);
2. ways of authentication for the use of the services of gov.gr;
3. submission of electronic applications to the CSCs; every citizen can submit applications electronically to the CSCs through the portal ermis.gov.gr, as well as through e-kep.gov.gr;
4. access to electronic solemn declaration document and its authorisation;
5. legal validity of electronic signatures and seals: Issued electronic documents contain an approved electronic signature and no original signature or seal is required. According to announcements by the Ministry of Administrative Reform, more than 27,000 solemn declarations and 11,500 authorisations were processed through the single portal within the first ten days of its operation.

These reforms have made a significant contribution to the electronic circulation of documents, the electronic service of citizens and the general avoidance of congestion in public services, not only contributing directly to the fight against the coronavirus but also indirectly to the improvement of the functioning of the public administration.

A few days after the activation of gov.gr, and specifically on 28 March 2020, the citizens of Greece were given the opportunity to activate the service of non-paper electronic prescriptions, which also allows for the electronic prescription of medicines to chronically ill people. The general lockdown created the need for specialised instructions given by the General Secretariat for Civil Protection. For this reason, the Ministry of Digital Government created the website forma.gov.gr through

which it undertook the task to inform citizens in detail and offer instructions on containment measures. This process can significantly contribute to the development of electronic information of citizens through public service sites, creating a new perspective of cooperation and service from public services.

Additionally, the electronic portal of Social Insurance services (e-Efka) allows access to citizen registration documents registered with the Ministry of Interior within the information system 'Citizens' Register' enhancing the electronic operation of the organisation. The National Health System (ESY) was at the epicentre of the crisis as it had to deal with the coronavirus pandemic, while, at the same time, it was heavily criticised for mistakes and shortcomings of the past and expected to lay the foundations for the future. In a very short time, more than 4,000 recruitments of medical staff and a large supply of medical equipment were approved for the operation of 75 new beds in intensive care units.

The cooperation of the Ministries of Health, Interior, and Digital Government resulted in the inauguration of the COVID-19 patient register which was and still is a reference point for the confirmed cases of the virus. The register contains useful data in combating and dealing with the pandemic and is available 24 hours a day.

At the same time, the creation of the [ethelontes.gov.gr](http://ethelontes.gov.gr) platform aimed at strengthening both human resources and the supply of medical equipment, while it attracted about 11,000 volunteers, including doctors, psychologists, students, and retired health professionals, creating aspects of electronic participation.

In the context of digital solidarity, the GIS implemented the [digitalsolidarity.gr](http://digitalsolidarity.gr) platform, which provided services related to distance work, e-learning, information, entertainment, as well as the provision of free babysitters, teachers, and nurses to families with medical personnel working at the frontline, contributing to the gradual development of a culture of e-governance and digital services. At the same time, the same platform allowed small businesses to gain access to free internet-marketing training sessions to adapt to the rapidly growing e-markets.

During the enforcement of lockdown, public bodies held video conferences to continue their smooth operation. This was made possible thanks to the [e:Presence.gov.gr](http://e:Presence.gov.gr) platform launched on 16 March 2020, while the first video conference of the Cabinet of Greece was held a few days later; an innovation for the Greek public administration which promoted electronic distance communication as a means for enhanced operation of organisations.

Within a short time from the introduction of the measures against COVID-19, public services and organisations managed to provide safe access to their employees to work from home. It is estimated that approximately 10,000 civil servants worked safely from home via the Virtual Private Network (VPN) implemented for this purpose for operators affiliated to the Syzefxis Network, developing the prospects for the further expansion of telecommuting models, and increasingly approaching the vision for a modern e-government. Thus, the protection and safety of workers, vulnerable groups, and the public interest are ensured.

In addition, the necessary measure of school closures led to the transition to a distance-learning environment in order for students to continue their education based on the three axes of:

1. asynchronous education,
2. modern education,
3. educational TV.

From the e-governance projects discussed above, it becomes clear that, in the case of Greece, the pandemic worked in a particularly ‘beneficial’ way to the field of administration. The emerging need for action has led to the improvement of the performance of public administration by introducing important elements of digital reforms, which have been a topic of discussion for several years, awaiting the appropriate conditions to become implemented.

### **E-Governance in Greece and Cyprus during the pandemic**

Similar reform efforts were carried out in the field of public administration of Cyprus, which proceeded with a significant number of e-governance reforms to deal with the unprecedented conditions brought about by the pandemic. The attention of the State administration turned on public services with the largest volume of citizen transactions. The urgent need to promote e-governance led to the immediate implementation of digital projects. These projects, however, have to a large extent raised concerns about their long-term effectiveness, as well as their overall functionality. These concerns derive mainly from the hurried adoption of digital projects without enough time for adequate design and implementation. At the same time, the health crisis revealed a series of gaps in essential services such as land registry, urban planning, the Registrar of Companies, education, and the Courts. Nevertheless, the use of e-governance projects was crucial in tackling the pandemic, and efforts for digital reforms have intensified.

The Deputy Ministry of Research, Innovation and Digital Policy played a special role in the implementation of digital reforms in the pandemic era. The pace of digital transformation, under the stifling pressure to provide practical solutions to support pandemic mitigation measures, is estimated to have given direction to several pilot operations after the pandemic. Important reform actions of the Ministry of Foreign Affairs consist of the following:

- a) the remote psychological care service launched on 30 March 2020 to assist COVID-19 patients and the general public, providing a purely digital service which could initiate a greater focus on online citizen information;
- b) the #DigitalSolidarityCY platform launched on 10 April 2020 aiming at providing digital services and applications to citizens and businesses, either for free or at a reduced cost, for as long as the restrictive measures to stop the spread of coronavirus spread would stay in place. It is major reform that follows the model of modern e-governance practices;
- c) the platform for the Emergency Management System for Handling confirmed COVID-19 cases COVID-19 introduced on 14 April 2020, which created a greater link between citizens and the electronic services of the Cypriot public administration.
- d) signing up to the electronic platform Ariadni was made possible on 13 July 2020.

Apart from the Ministry of Research, Innovation and Digital Policy, the trend towards the use of digital media permeates the entire realm of the Cypriot public administration through the implementation of multifaceted e-governance projects. As a matter of fact:

1. One of the digital projects completed under pressure was the electronic processing of allocation of bonuses procedures, partial or total suspension of work for employees and companies. It is a very important reform which, although it has received a lot of criticism (regarding individual shortcomings or problems), it is moving towards the improvement of e-governance levels in Cyprus.
2. In the context of digital reforms, significant electronic facilities have been set up for citizen transactions with Social Insurance Services contributing to the effort of developing an integrated digital social insurance system.

3. An important element of e-governance is the implementation of e-learning programs: the closure of educational institutions led to the creation of a hybrid system through which students, parents, and teachers can communicate and where teaching takes place. This is a series of reforms that can cultivate, in addition to education, a comprehensive e-collaboration.

From the above, it can be concluded that in the case of the Cypriot public administration there was a tendency to intensify the efforts to implement e-governance systems amidst the pandemic. This effort is considered positive, although - drawing on the example of Greece - Cyprus could further seize the 'opportunity' offered by the health crisis to achieve more drastic digital reforms (it should be noted that Greece is behind Cyprus in terms of e-governance, according to the DESI). This conclusion is based on the assumption that despite the fact that Cyprus ranks higher compared to Greece in most e-governance indicators, Greece intensified its efforts during the pandemic in an attempt to shield Greek society from the dangers of the coronavirus through administrative measures taken to avoid overcrowding. Thus, Greece reaped the added benefit of improving the administrative system through the development of e-governance projects (to a greater proportion than the corresponding effort of Cyprus). This observation is based on the recorded digital reforms that took place during the pandemic, given the current technological level of each country.

## Discussion

On their way from bureaucratic administration to NPM and Public Governance, the Greek and Cypriot public sectors are called upon to increase their levels of efficiency and effectiveness in response to their emerging role. The introduction of e-governance is a contemporary requirement which is increasingly merged in the administrative function of all developed countries. Of course, the fact that this is a very demanding process which often finds significant obstacles rendering the introduction and sustenance of digital reforms difficult is a given. The difficulties of ICT integration are often categorised into the following broad areas: inadequate strategic planning; the particularities of structural features of public administration; the inadequate management of information systems; inefficient human-resources management, and the disoriented organisational culture.<sup>51</sup> All of the above constitute problematic areas that are encountered in Greece and Cyprus to a large extent,

---

<sup>51</sup> Spinellis et al. (no 24).



leading to poor performance in e-governance. We should not undervalue, on the other hand, the significant progress observed recently' even though Greece and Cyprus still fall behind European standards.

The various dimensions of the shortcomings already mentioned have hampered digital reform, resulting in e-governance projects being implemented at a much slower pace than in other EU Member States. However, an increased differentiation of the reform pace was observed during the pandemic crisis. The demands of adapting the administrative systems to the extreme health conditions led to the immediate implementation of projects which –as history has shown– would have otherwise been implemented at a much slower pace. The acceptance of the new rhythms by employees and citizens, the new strategic planning (now adapted for the pandemic), the change of the structural characteristics of public administration (including digital aspects, new working conditions, more e-government projects, etc.), the reorganisation of the management of information systems and the necessary reform of the management of human resources, as well as the much-needed change of an organisational culture which had remained rigid for several decades led to the development of a different business environment; one favouring reforms. Under these circumstances, the pandemic can be an excellent opportunity to integrate e-governance projects.

This extreme situation experienced by citizens and businesses in Greece and Cyprus led to the acceptance of any measure deemed necessary to tackle the health crisis, creating an unprecedented window of opportunity for the introduction of key reforms. In this context, Greece and Cyprus have achieved significant reforms in the field of e-government aiming to tackle COVID-19 (avoiding social gatherings, encouraging remote work, restricting travel, etc.). Through the previous analysis it becomes clear that Greece has been more efficient in relation to the reform efforts carried out, setting an example for Cyprus. The extent and scope of the digital reforms carried out during the pandemic indicate a significant commitment of the Greek government to implement a large number of digital reforms that have been under planning for years. This extensive effort to develop e-governance is evolving into a highly successful public policy that can set an example for other countries. Although Cyprus ranks higher than Greece in the most important e-governance indicators, it does not seem to have seized the 'opportunity' of the pandemic to the same extent as Greece. Of course, the comparison of reform practices between the two countries could be considered invalid as there are inherent differences between

the two countries in key areas. It is a fact that the English influences of the Cypriot public administration combined with the more advanced infrastructures and the differentiated civil service culture render any attempts for comparative analysis with Greece particularly difficult (which is more influenced by Franco-German systems). The recent reforms in Greece manifest that the integration of new e-governance elements is now a high strategic priority aiming to tackle the pandemic while contributing to the development of its technological infrastructure and hence “export” promising practices to Cyprus aiming at a similar course. In this context, the exchange of know-how could contribute to the further promotion of e-government in the Cypriot public administration by implementing additional digital reform projects.

## Conclusion

In the contemporary administrative environment, it is obvious that e-governance is a new administrative reality which can make a decisive contribution to improving the efficiency and quality of public administrations.<sup>52</sup> Even though Greece and Cyprus have prioritised the development and implementation of e-governance, while recognising it lies among the high-priority policies, they still lag behind the European average. The reaction of the State administrations in view of the unprecedented situation brought about by the arrival of COVID-19 is the introduction of a field of separate administrative analysis. In these circumstances, the opportunity was created to further develop the implementation plan of e-governance to assist citizens and businesses through digital media, avoiding social gatherings and, subsequently, the risk of the transmission of the virus. The need to promote e-governance systems has helped overcome difficulties of the recent past that have been hindering the comprehensive implementation of digital reforms.<sup>53</sup> In this spirit, the pandemic crisis is evolving into a unique opportunity to significantly develop e-governance in Greece and Cyprus by compensating for the lost ground in relation to European standards. In this venture, Greece seems to be taking advantage of this opportunity to a great extent, forming a framework of good practices, which can also prove use-

---

<sup>52</sup> Georgios Aspridis, Ioannis Rossidis, Kalliopi Tsiknaki, ‘The Partnership of Change Management in the Effort to Enhance the Effectiveness of Administrative Reforms’ (‘Η σύμπραξη της Διοίκησης Αλλαγών στην Προσπάθεια Ενίσχυσης της Αποτελεσματικότητας των Διοικητικών Μεταρρυθμίσεων’) (4th Annual Scientific Conference of the Association of Greek Journalists 2017) 7-10 (in Greek).

<sup>53</sup> Ioannis Rossidis, Dimitrios Belias, Georgios Aspridis, *Change Management and Leadership (Διαχείριση Αλλαγών και Ηγεσία)* (Athens: Tziolas, 2020) (in Greek).

ful for the case of Cyprus. It is well-established by now that the special circumstances arising from the pandemic (e.g. high government priority, European funding, current health requirements, the need for acceptance of administrative changes by workers/citizens/companies) have led to an environment conducive to reform and can thus make a significant contribution to improving public administrations.

## References

- Apostolakis I., E. Loukis, I. Halaris, *Electronic Public Administration: Organisation, Technology and Applications (Ηλεκτρονική Δημόσια Διοίκηση: Οργάνωση, Τεχνολογία και Εφαρμογές)* (Athens: Papazisis, 2008) (in Greek).
- Apostolakis I., *Critical Issues in the Path to e-Governance and Governance: State Interventions and Civil Society* (2005), available at: [http://www.pspa.uoa.gr/fileadmin/pspa.uoa.gr/uploads/Research/EDE/Conferences/SDE\\_2005/Proposals/Apostolakis\\_Ioannis.pdf](http://www.pspa.uoa.gr/fileadmin/pspa.uoa.gr/uploads/Research/EDE/Conferences/SDE_2005/Proposals/Apostolakis_Ioannis.pdf) (in Greek) (last accessed 11 July 2021).
- Aspridis G., I. Rossidis, K. Tsiknaki, *The partnership of Change Management in the Effort to Enhance the Effectiveness of Administrative Reforms (Η σύμπραξη της Διοίκησης Αλλαγών στην Προσπάθεια Ενίσχυσης της Αποτελεσματικότητας των Διοικητικών Μεταρρυθμίσεων)* (4th Annual Scientific Conference of the Association of Greek Journalists, 2017) (in Greek).
- Baker D., *Strategic Change Management in Public Sector Organisations* (Oxford: Chandos Publishing, 2007).
- Barbas L., *Elements of Fiscal Law (Στοιχεία Δημοσιονομικού Δικαίου)* (Athens-Thessaloniki: Sakkoulas, 2018) (in Greek).
- Borins S., *The New Public Management is Here to Stay* (1995) 38(1) *Canadian Public Administration*.
- Bourandas D., *Management: Theoretical Background-Modern Practices (Μάνατζμεντ: Θεωρητικό Υπόβαθρο-Σύγχρονες Πρακτικές)* (Athens: Benou, 2015) (in Greek).
- Chen Y, *Managing Digital Governance: Issues, Challenges, and Solutions* (New York: Routledge, 2017).
- Chevallerau F., 'The Impact of e-Governance on Competitiveness, Growth and Jobs' (Belgium: European Communities, 2005), available at [https://www.cis-co.com/c/dam/global/de\\_de/assets/pdfs/publicsector/egov\\_competitiveness\\_02\\_05.pdf](https://www.cis-co.com/c/dam/global/de_de/assets/pdfs/publicsector/egov_competitiveness_02_05.pdf) (last accessed 11 July 2021).
- Hellenic Agency for Local Development and Local Government (E.E.T.A.A. S.A) *The Necessary Conditions for the Digital Convergence of the Local Authorities*

- and the Transition of T.A. in Local e-Governance (Οι Αναγκαίες Προϋποθέσεις για τη Ψηφιακή Σύγκλιση των Ο.Τ.Α. και τη Μετάβαση της Τ.Α. στην Τοπική Ηλεκτρονική Διακυβέρνηση) (Athens: Institute of Local Government, 2006) (in Greek).
- Ferlie E., L. E. Lynn Jr., C. Pollitt, *The Oxford Handbook of Public Management* (New York: Oxford University Press, 2011) 33-76.
- General Secretariat of Public Administration, *Public Services Communication Regulation (Κανονισμός Επικοινωνίας Δημοσίων Υπηρεσιών)* (Athens: National Printing Office, 2003) (in Greek).
- Georgiou V., *Public Administration in Cyprus: Administrative Law, Jurisprudence and Introduction to Management Science (Η Δημόσια Διοίκηση στην Κύπρο: Διοικητικό Δίκαιο, Νομολογία και Εισαγωγή στη Διοικητική Επιστήμη)* (Nicosia: En Typois, 2012) (in Greek).
- Gupta A., P. K. Suri, R. K. Singh, 'Analyzing the Interaction of Barriers in E-Governance Implementation for Effective Service Quality: Interpretive Structural Modeling Approach' (2019) 7(1) *Business Perspectives and Research* 59-75, available at <https://journals.sagepub.com/doi/pdf/10.1177/2278533718800562> (last accessed 11 July 2021).
- Karkatsoulis P., 'Governance as a Content and Decision-Making Process for Public Affairs' ('Η Διακυβέρνηση ως Περιεχόμενο και Διαδικασία Λήψης Απόφασης για τις Δημόσιες Υποθέσεις) (2001) 7 *Science and Society*, 205-224, available at <https://ejournals.epublishing.ekt.gr/index.php/hapscpbs/article/view/24954> (last accessed 11 July 2021) (in Greek).
- Ladi S., 'Citizens' Participation in Public Policy: from Theory to Practice' ('Συμμετοχή των Πολιτών στη Δημόσια Πολιτική: από τη Θεωρία στην Πράξη') (2010) 24 *Science and Society*, 79-98, available at <https://ejournals.epublishing.ekt.gr/index.php/sas/article/viewFile/904/927.pdf> (last accessed 11 July 2021) (in Greek).
- Maistros P. G., *The Three Waves of Public Administration Reforms in Greece [1975-2015 +] (Τα Τρία Κύματα Μεταρρυθμίσεων της Δημόσιας Διοίκησης στην Ελλάδα [1975-2015+])* (Athens: Papazisis, 2009) (in Greek).
- Makridimitris A., *Approaches to the Theory of Organisations (Προσεγγίσεις στη Θεωρία των Οργανώσεων)* (Athens: Kastaniotis, 2003) (in Greek).

- Makridimitris A., M. H.Pravita, *Management Science I: Public Administration. Elements of Administrative Organization (Διοικητική Επιστήμη I: Δημόσια Διοίκηση. Στοιχεία Διοικητικής Οργάνωσης)* (Athens: Sakkoulas, 2012) (in Greek).
- Ministry of Administrative Reform and Electronic Government, *Interoperability & Electronic Transaction Services Framework (Πλαίσιο Διαλειτουργικότητας & Υπηρεσιών Ηλεκτρονικών Συναλλαγών)* (2012), available at <http://www.e-gif.gov.gr> (last accessed 11 July 2021) (in Greek).
- Ministry of Digital Telecommunications and Media, *National Digital Strategy 2016-2020 (Εθνική Ψηφιακή Στρατηγική 2016-2020)* (December 2016), available at [http://www.epdm.gr/el/Documents/EP\\_MDT/GR-Digital-Strategy\\_2016-2021.pdf](http://www.epdm.gr/el/Documents/EP_MDT/GR-Digital-Strategy_2016-2021.pdf) (last accessed 11 July 2021) (in Greek).
- Organisation for Economic Co-operation and Development (OECD), *Digital Government Strategies for Transforming Public Services in Welfare Areas* (2016), available at <https://www.oecd.org/gov/digital-government/Digital-Government-Strategies-Welfare-Service.pdf> (last accessed 11/07/2021).
- OECD, *In Search of Results. Performance Management Practices* (Paris: OECD Publications, 1997).
- Papoulias D., *The Crisis is Changing our Lives and our Management (Η Κρίση Αλλάζει τη Ζωή μας και το mManagement)* (Athens: Kritiki publications, 2009) (in Greek).
- Paraskevas M., G. Asimakopoulos, V. Triantafyllou, *Information Society: Infrastructure, Services, and Impacts (Κοινωνία της Πληροφορίας: Υποδομές, Υπηρεσίες και Επιπτώσεις)* (Athens: SEAB, 2015) (in Greek).
- Rammata M., *Contemporary Greek Public Administration: Between Bureaucracy and Management (Σύγχρονη Ελληνική Δημόσια Διοίκηση: Ανάμεσα στη Γραφειοκρατία και το Μάνατζμεντ)* (Athens: Kritiki publications, 2011) (in Greek).
- Rossidis I., D. Belias, G. Aspridis, *Change Management and Leadership (Διαχείριση Αλλαγών και Ηγεσία)* (Athens: Tziolas, 2020) (in Greek).
- Rossidis I. et al., ‘Preparation and Development of the Framework for the Implementation of Organisational Changes’ (‘Προετοιμασία και Ανάπτυξη του Πλαισίου Εφαρμογής Οργανωσιακών Αλλαγών’) (Hellenic Society of Counseling and Guidance conference: The Individual and Collective Approach to Crisis Management Consulting and the Career Counseling of Socially Vulnerable Groups Athens, March 2016)) 655-665, available at [65](https://www.research-</a></p>
</div>
<div data-bbox=)

- gate.net/publication/319665227\_Proetoimasia\_kai\_anaptyxe\_tou\_plaisiou\_epharmoges\_organosiakon\_allagon (last accessed 11 July 2021) (in Greek).
- Spiliotopoulos E., *Handbook of Administrative Law (Εγχειρίδιο Διοικητικού Δικαίου)* (Athens: Law Library, 2017) (in Greek).
- Spinellis D. et al., *E-governance in Greece: Successes, Problems and the Road to Digital Transformation (Ηλεκτρονική Διακυβέρνηση στην Ελλάδα: Επιτυχίες, Προβλήματα και ο δρόμος προς τον Ψηφιακό Μετασχηματισμό)* (Athens: DIANEosis Research and Analysis Organization, 2018), available at [https://www.dianeosis.org/wp-content/uploads/2018/03/EGov\\_Upd\\_090318.pdf](https://www.dianeosis.org/wp-content/uploads/2018/03/EGov_Upd_090318.pdf) (last accessed 11 July 2021) (in Greek).
- Tripathi K. P., 'A Study of Information Systems in Human Resource Management (HRM)' (2011) 22(8) *International Journal of Computer Applications* 9-13.
- Tsekos Th. N., 'European Rhythms and Greek Ways: The (Uncertain) Greek Course Towards the (Unclear) European Administrative Space ('Ευρωπαϊκοί Ρυθμοί και Ελληνικοί Τρόποι: Η (Αβέβαιη) Ελληνική Πορεία προς τον (Ασαφή) Ευρωπαϊκό Διοικητικό Χώρο') in Passas A., Th. N. Tsekos (eds), *National Administration and European Integration: The Greek experience* (Athens: Papazisis, 2008) (in Greek).
- Ugboro I. O., K. Obeng, O. Spann, 'Strategic Planning as an Effective Tool of Strategic Management in Public Sector Organizations: Evidence form Public Transit Organizations' (2011) 43(1) *Administration & Society*.
- United Nations Development Programme (UNDP), 'Institutional Reform and Change Management: Managing Change in Public Sector Organisations' (UNPD Capacity Development Resource, 2006).
- Vassilopoulos A., 'E-Governance in Greece' ('Η Ηλεκτρονική Διακυβέρνηση στην Ελλάδα') (2016), available at [https://www.academia.edu/30423917/E\\_Governance\\_in\\_Greece\\_%CE%97%CE%BB%CE%B5%CE%BA%CF%84%CF%81%CE%BF%CE%BD%CE%B9%CE%BA%CE%AE\\_%CE%94%CE%B9%CE%B1%CE%BA%CF%85%CE%B2%CE%AD%CF%81%CE%BD%CE%B7%CF%83%CE%B7\\_%CF%83%CF%84%CE%B7%CE%BD\\_%CE%95%CE%BB%CE%B-B%CE%AC%CE%B4%CE%B1\\_Athanasios\\_Vasilopoulos\\_Gr\\_](https://www.academia.edu/30423917/E_Governance_in_Greece_%CE%97%CE%BB%CE%B5%CE%BA%CF%84%CF%81%CE%BF%CE%BD%CE%B9%CE%BA%CE%AE_%CE%94%CE%B9%CE%B1%CE%BA%CF%85%CE%B2%CE%AD%CF%81%CE%BD%CE%B7%CF%83%CE%B7_%CF%83%CF%84%CE%B7%CE%BD_%CE%95%CE%BB%CE%B-B%CE%AC%CE%B4%CE%B1_Athanasios_Vasilopoulos_Gr_) (last accessed 11 July 2021) (in Greek).