ORGANISATIONAL FRAMEWORK OF HUNGARIAN E-ADMINISTRATION

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ABSTRACT: *The eEurope action plans were the first initiatives that recognized the importance of the general populace in the pending info-communication developments, and diverted the focus of strategy-framing to develop client-centric and –controlled services that would adapt to the ever-changing needs. The basics of regulating these areas lie in extensive strategic planning and the appropriate legal background. Both play a dominant role in the modernisation of public administration, not just because of their compulsory nature, but also because the success and pace of modernisation relies on determining the proper direction, roles and resources.*

The transformation generated by e-Administration (and IT in general) also results in the extensive reform of the legal background[1]. Therefore, following the fulfilment of the personal, material and IT prerequisites of e-Administration, its detailed legal rules also had to be created.

This article investigates the challenges and problems concerning the development of e-Administration, and aims to present the organisational resources available for its realisation in Hungary. The aforesaid problems are investigated primarily from a technological perspective, with due attention given to back office reactions and the solution of the various identified legal and strategic obstacles.

KEYWORDS: *e-government, e-administration, organisational resources, infocommunication strategy*
JEL CODE: *K 23*

1. INTRODUCTION

This article investigates the challenges and problems concerning the development of e-Administration, and aims to present the organisational resources available for its realisation in Hungary. The aforesaid problems are investigated primarily from a technological perspective, with due attention given to back office reactions and the solution of the various identified legal and strategic obstacles.

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[1] Act CCXXII of 2015 on the General Rules for Electronic Administration and Trust Services (hereafter: Eüsztv.); Act CL of 2016. on General Public Administration Procedures (hereafter: Ákr.).

The structure and operation of the communication system is fundamentally influenced by the technical, economic, cultural and political environment (POLYÁK – SZŐKE, 2014, p. 70.). A lack of electronic development in public administration could readily impact national economy in a negative way (Module 5 of the Government Window Administrator Specialized Training, 2014, p. 9.). The digitalisation of civil services holds indisputable advantages; for example, the following associated factors can readily improve the quality of administration:

-       Replacing analogue procedures.
-       Ensuring more efficient means for accessing information.
-       Changing organisational structure via decentralisation, thus improving information access and decision making for civil servants.
-       Improving the public administration culture (NEMESLAKI, 2017, p. 15.).

The growth of e-Administration is facing numerous obstacles, including, among others, the insufficient level of IT literacy, ignorance, the digital divide (MOLNÁR, 2011, p. 23., PODOSKI, 2006, Piac és Profit, 2018), the fear of the unknown and personal opposition (MOLNÁR – Z. KARVALICS, 2004. p. 5.). Despite the various dimensions of the digital divide, it is interesting to note that many times the people noted to rank lower in the information society are the ones who are more interested in e-Administration. These are not exclusively client-side obstacles, but are identifiable among public servants as well; thus, the improvements should cover both the front and back office sides.

Technology and law constantly interact with each other: they mutually affect each other's processes. Technological developments may also readily affect public administration as well, though opinions differ on this matter. The techno-optimistic approach claims that such relationship exists; the techno-sceptical approach, however, states that while technology can indeed transform internal workflows and the composition of the workforce, it cannot identify any changes in the relationship between public administration and its external environment that could be caused by ICTs (HAJNAL – KIRÁLY, 2014, p. 33.).

2.   THE ROLE OF STRATEGY IN E-ADMINISTRATION

Albeit e-Administration has been planned with various legal references and regulations since the early 2000s in Hungary, legislation failed to find a proper place in administration for controlling it, and also could not handle the legal questions related to e-Services with the complexity they required. However, starting from 2015, the then-sporadic solutions were replaced by a completely new approach.

The eEurope action plans were the first initiatives that recognized the importance of the general populace in the pending info-communication developments, and diverted the focus of strategy-framing to develop client-centric and –controlled services that would adapt to the ever-changing needs. The first step of this relies on considering client needs, constant communication, and performing related surveys; all these help in creating a general overview on the direction and pace of developing electronic administrative methods, eventually defining the best possible practices. Such client needs are, however, different for citizens, enterprises and foreigners: recent legal regulations have already reacted to this, for example, by keeping records on foreign citizens, and establishing

online administrative portals like the company gate ("cégkapu") or the lawsuit gate ("perkapu").

The basics of regulating these areas lie in extensive strategic planning and the appropriate legal background. Both play a dominant role in the modernisation of public administration, not just because of their compulsory nature, but also because the success and pace of modernisation relies on determining the proper direction, roles and resources. As Budai states, "*[t]he legislative basics of modernising public administration [are] adaptive in nature*" (BUDAI, 2011, p. 1.) . The cooperation of public administrative institutions and specialised agencies should start in this area, along with creating interoperability.

When it comes to e-Administration, Hungary is certainly not short on IT strategies. Some of these focus on IT in general, especially on its application in the private and public sectors (consider the Nemzeti Infokommunikációs Stratégia [National Info-Communication Strategy]); others on a specific branch (such as the Digitális Oktatási Stratégia [Digital Education Strategy]). Moreover, it can even occur that e-Administration is only defined as a mere tool or subdivision of a public administration strategy (as is the case with the Magyary Programme). Strategies are basically delivered on an assembly line, and instead of basing them on theses that are backed up by grounded and detailed impact reports, decisions are made hastily and incorrectly without any actual precedents and experience (BUDAI, 2015, p. 57.). These strategies must be connected, and specialised strategies should be linked to general strategies, with the former ones being used to break down the latter into more detailed chapters of analysis.

Although Hungary already has an IT strategy, planning is constantly generated by technological (and related economic and societal) changes. This planning, however, should not mean the complete replacement of the already existing strategy and its methods in force; instead, it should react on current problems by building on previous experiences. Getting rid of older solutions and defining a completely new path has huge innovation risks (GÁSPÁR, 2017, p. 9.), after all. When performing the strategic planning, the primary objective is to clearly define the goals to achieve, and to assign the proper tasks to said goals. These tasks must be aligned with the current circumstances and all typical administrative scenarios, and must be constantly revised. Said scenarios are summarized very well in Mátyás Gáspár's article (GÁSPÁR, 2017, pp. 5-7.), along with the available technologies and related tasks. In his vision for the future of public administration, the role of local administrations shifts toward local economic and societal organisations, and to cross-sectorial cooperation. IT solutions facilitating these tendencies include smart/intelligent settlement projects, community IT initiatives, electronic means for participatory democracy, and internet access in outdoor community spaces. The tasks related to such developments include municipal technology developments, the establishment of the institutional system of partnership cooperation, the involvement of the local residence in said developments, and creating the strategy of community development and smart/intelligent settlements[2].

State reforms and IT developments result in creating the appropriate legislative background, and in *defining the schedule* of the tasks aiming to involve and realise the

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[2] This was also forecasted by the new task assignment of Act CLXXXIX of 2011 on Local Governments in Hungary (hereafter referred to as "Mötv").

above-mentioned targets. However, mapping out the tasks cannot be an initial one-time activity; instead, it requires constant revision, as technological developments inevitably generate newer tasks and challenges.

When mapping out the tasks, continuity is not the only factor we must consider: it is also important to realise that e-Administration has a sizable horizontal influence, i.e. it affects multiple areas. Regarding the legal environment, it is not just administrative law which is affected by it: we must also consider its data protection, information security, copyright, business law[3] or penal law effects as well. In light of the above list, it is probably clear that the level of e-Administration development affects other branches of law as well (such as civil law or penal law). Considering this, strategic planning is definitely facilitated by the organisation, breakdown, and customisation of related tasks (GÁSPÁR, 2017, p. 8.).

Without the development of underdeveloped regions, an increase in IT literacy and the extension of user awareness, the large-scale headway of e-Administration is not possible. Therefore, this area must be also subjected to a new type of regulation following a new logic.

Based on EU forecasts, there will be 16 million more jobs requiring general IT competences from job-seekers by 2020. For 2015, the estimation claimed that 90% of the available jobs will require job-seekers to possess basic IT competences[4].

3. THE LEGAL CHALLENGES OF E-ADMINISTRATION

The transformation generated by e-Administration (and IT in general) also results in the extensive reform of the legal background[5]. Therefore, following the fulfilment of the personal, material and IT prerequisites of e-Administration, its detailed legal rules also had to be created.

Framework regulations or norms disregarding actual facts are undesired for this field; instead, it requires *rules covering all subdivisions, and making the existing regulations more tangible*. The *clarification of the legal background* is also important. Firstly, it must be investigated, and then must be either simplified or described in more detail (whichever is desired)[6]. Then, these regulations must be aligned with the EU guidelines currently in effect. The breakdown of the rules to the regional or local level is also inevitable (KÓPIÁS – MOLNÁR ed., 2008, pp. 85-93.). On the one hand, this means a certain pressure from the central level of administration (from the side of the Parliament, the government or the various ministries); on the other hand, it also implies the closer cooperation of the local administration subsystem in working out coherent regulations.

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[3] Such as the Act CVIII of 2001 on Certain Issues of Electronic Commerce Activities and Information Society Services.

[4] Europa.eu. (2014). *Europe's Digital Progress Report*. [online] Available at: https://europa.eu/european-union/file/1515/download_hu?token=BR0rWYPW [30.12.2017].

[5] Act CCXXII of 2015 on the General Rules for Electronic Administration and Trust Services (hereafter: Eüsztv.); Act CL of 2016. on General Public Administration Procedures (hereafter: Ákr.).

[6] For example, when commenting on the previous data protection act, SZITTNER thought that „*as an almost lawful consequence of societal transformation„ we gradually created one of the strictest data protection regulation in the world."* SZITTNER, 2009, p.4.

The above-mentioned process was realised by two means: firstly, via *organisational integration*; and secondly, via *legal* and *technical unification*. Legal unification was achieved with Eüsztv.[7], while the technical standardisation was carried out through the deployment of "szabályozott elektronikus ügyintézési szolgáltatások" [regulated electronic administration services, hereafter SZEÜSZs][8], the compulsory usage of government systems, and the municipal Application Service Provider (ASP) system. By standardising information management, the efficiency of public administration duties can certainly be improved.

Originally, the approach was to map standard procedures to the new electronic systems, which, many times, was far from being optimal. The current regulations, on the other hand, cover only the major tasks (such as the means of contact, identification and requests); legislation does not interfere into the procedures themselves. The framework regulations of the Ákr. also follow this approach. When it comes to public administration, it is not enough to merely define the general rules of e-Administration; instead, a special legal/IT regulation environment and policy[9] is required that would govern electronic administration and could be applied to specific cases as well.

Short-term goals include the *complete e-Administration support* of the 25 most frequently requested EU services, to meet the Common List of Basic Public Services (CLBPS) recommendations. The development of country-level e-Administration should be started with establishing SZEÜSZs, and improving their available functions and services as soon as possible; the major goal here should be the creation of an integrated governmental and municipal solution. After this is achieved, a unified and integrated back-office system should be developed and maintained.

Besides the various IT infrastructure developments, the spreading of e-Administration services was also facilitated by making much stricter regulations in the Act CXL of 2004 on the General Rules of Administrative Proceedings and Services (hereafter: Ket.). Originally, Ket. allowed administrative bodies to completely exclude e-Administration solutions in their practices; however, with the advances in technology, such exclusion conditions were gradually restricted by legislation, first to municipal authority duties, and to cases specified in acts or government decrees worked out by the original legislative sphere. The next milestone in this matter was the Ákr. passed in 2018, as this act does not list any of the aforementioned exclusions in administrative communication. Finally, when it comes to Eüsztv., the act provided a detailed list on the possibilities and exclusion conditions of electronic administration; however, it does not list municipalities as agents subject to exclusion; actually, they are defined as administrative organisations required to support e-Administration services. In other words, local administrations could not evade anymore the responsibility of providing e-Administration services; on the contrary, e-Administration is defined as the premier administrative service, with the compulsory duties and personal circle clearly defined. It specifically names state and local administration as the main administrative agents bound to e-Administration services, in line with the requirements of the Magyary 12.0 Programme. This programme considers

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[7] Act CCXXII of 2015 on the General Rules for Electronic Administration and Trust Services (hereafter: Eüsztv.)

[8] For more information, see Chapter 4: The Effects of Technological Developments on E-Administration and the Organisation.

[9] The Nemzeti Infokommunikációs Stratégia [National Infocommunications Strategy].

the extension of e-Administration not as an independent field of intervention, but rather as a toolset of operating and developing public administration, and a very important mode of improving the efficiency of performing administrative duties[10].

Therefore, we must implement and utilize *the best practices*, strategies and experiences *of our developed neighbours*[11], and we must also ensure the enforcement of all basic principles of the Ket. and Ákr. that call for establishing the service-provider state. We must also consider how other EU member states handle the approach of their public servants to e-Administration, what changes they plan to better involve the general populace in it, and what ideas they have on the IT, technological, legal and organisational aspects of electronic administration.

Regarding this chapter, I must also highlight one last obstacle in the spread of e-Administration: the basic incompetence and the lack of professional planning. In recent years, it was apparent that the strategy making and the creation of the legal background was performed by representatives who did not possess the required IT, technological or legal knowledge, and were unaware of the required antecedents. Therefore, care must be taken to strengthen education in this field, especially in the areas of public administration and legal IT studies (ORBÁN, 2013, pp. 111-120.). Nowadays, it is simply not enough to train generalists with a complete overview of public administration, or specialists who are experts in a given area. Improvements are needed in the curriculum, as the understanding of e-Administration tendencies is required to properly perform daily duties.

4.   ORGANISATIONAL RESOURCES IN E-ADMINISTRATION

Due to the lack of EU institutions in any member state, EU regulations are enforced and executed both by EU institutions and the state administration of the member states as a single organisation. In this sense, the public administration of the EU is a shared administration (TORMA, 2011, pp. 313-332.). Albeit member states renounced some of their autonomy, the definition of national state administration is still in the member states' sphere of authority. When it comes to e-Administration, the primary roles are played by the Council, the European Parliament and the Commission, which aim to affect the area

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[10] Magyary Program. (2012). *Magyary Zoltán Közigazgatás-fejlesztési Program.* [online] Available at: https://magyaryprogram.kormany.hu [19.12.2017].

[11] Take the following examples:

- One can request an e-card since 1999 in Finland, and can already vote in Estonia via e-ID card. OECD E-Government Task Force (2003). The Case for E-Government: Excerpts from the OECD Report „The E-Government Imperative". *OECD Journal on budgeting*, 3(01). Available at: http://www.keepeek.com/Digital-Asset-Management/oecd/governance/the-case-for-e-government_budget-v3-art5-en#.WkUIijRG3IU#page4 [28.12.2017], https://e-estonia.com/solutions/e-governance/i-voting/ [16.01.2018]
- Austria has introduced personal identification and electronic signature services through mobile phones in 2009. For more information, see: https://www.handy-signatur.at/hs2/ [28.12.2017]. For more information on Estonia's mobile-idenfitication, see: https://e-estonia.com/solutions/e-identity/mobile-id [13.01.2018]
- In Austria, e-Government is regulated since 2004 via the eGovernment Gesetz, through the framework of ELAK (Elektronischer Akt): see www.digitales.oesterreich.gv.at for more information. In the UK, the Electronic Communication Act is in effect since 2000.
- In 2013, a new Infocommunications strategy was published: the End User Device Strategy, interoperability standards. See https://www.gov.uk/government/publications/end-user-device-strategy-interoperability-standards [12.01.2018]

via announcements, decisions, governing principles[12] and decrees[13]. These tools are used to establish general Infocommunications strategies[14], experimental projects and programmes[15], or proposals on further developments. The cooperation between the ministers responsible for e-Administration is also pivotal[16].

Currently in Hungary, the responsibilities related to e-Administration, the development of the public administration IT infrastructure, and the duties related to personal data and residency records are assigned to the *Minister of Interior*. Within the ministry, a deputy IT under-secretary is assigned to handle electronic administration matters.

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[12] Related to this area, see the following EU regulations: Directive 2003/98/EC of the European Parliament and of the Council of 17 November 2003 on the re-use of public sector information, HL L 345., 2003.12.31., p. 90.., Directive 2001/29/EC of the European Parliament and of the Council of 22 May 2001 on the harmonisation of certain aspects of copyright and related rights in the information society, HL L 167., 2001.6.22., p.10., Directive 96/9/EC of the European Parliament and of the Council of 11 March 1996 on the legal protection of databases HL L 77., 1996.3.27., p.20., Directive 95/46/EC of the European Parliament and of the Council of 24 October 1995 on the protection of individuals with regard to the processing of personal data and on the free movement of such data, HL L 281., 1995.11.23., p.31.

[13] Regulation (EU) No 910/2014 of the European Parliament and of the Council of 23 July 2014 on electronic identification and trust services for electronic transactions in the internal market and repealing Directive 1999/93/EC, OJ L 257, 28.8.2014, pp. 73–114. Available at: http://eur-lex.europa.eu/legal-content/HU/TXT/?uri=celex%3A32014R0910 [31.01.2018]

[14] See Chapter 2 The Legal Challenges of e-Administration for more details.

[15] Just a couple examples:

- MODINIS – Decision No 2256/2003/EC of the European Parliament and of the Council of 17 November 2003 adopting a multiannual programme (2003-2005) for the monitoring of the eEurope 2005 action plan, dissemination of good practices and the improvement of network and information security (MODINIS), OJ L 336, 23.12.2003, pp. 1–5. Available at: http://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1517412324329&uri=CELEX:32003D2256 [31.01.2018];
- The IDA programme (1999-2004) to follow-up on the eEurope 2005 initiative – Decision (EU) 2015/2240 of the European Parliament and of the Council of 25 November 2015 establishing a programme on interoperability solutions and common frameworks for European public administrations, businesses and citizens (ISA2 programme) as a means for modernising the public sector, OJ L 203., 1999.08.03., pp. 1–8. Available at: http://eur-lex.europa.eu/legal-content/HU/TXT/?uri=CELEX%3A31999D1719 [31.01.2018]; 1720/1999/EC: Decision of the European Parliament and of the Council of 12 July 1999 adopting a series of actions and measures in order to ensure interoperability of and access to trans-European networks for the electronic interchange of data between administrations (IDA), OJ L 203., 1999.08.03., pp. 9–13. Available at: http://eur-lex.europa.eu/legal-content/HU/ALL/?uri=CELEX:31999D1720 [31.01.2018]
- eContentplus Programme (2005-2008) – Decision No 456/2005/EC of the European Parliament and of the Council of 9 March 2005 establishing a multiannual Community programme to make digital content in Europe more accessible, usable and exploitable, OJ L 79., 2005.03.24., pp.1-8. Available at: http://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1517411351694&uri=CELEX:32005D0456 [31.01.2018]
- IDABC Programme (2005-2009) – Decision No 387/2005/EK of the European Parliament and of the Council of 21 April 2004 on the interoperability of pan-European e-Administration services for administrative bodies, businesses and citizens, HL L 260., 2009.10.03., 20.p. Available at: http://eur-lex.europa.eu/legal-content/HU/TXT/?uri=CELEX%3A32004D0387 [31.01.2018]
- ISA program – Decision No 922/2009/EK of the European Parliament and of the Council of 16 September 2009 on the tools of interoperability among European public administration bodies, 20.p. Available at: http://eur-lex.europa.eu/legal-content/HU/ALL/?uri=CELEX:32009D0922 [31.01.2018]
- ISA2 program (2011-2015) – Decision (EU) 2015/2240 of the European Parliament and of the Council of 25 November 2015 establishing a programme on interoperability solutions and common frameworks for European public administrations, businesses and citizens (ISA2 programme) as a means for modernising the public sector, OJ L 318., 2015.12.04., pp.1-16. Available at: http://eur-lex.europa.eu/legal-content/HU/TXT/?uri=CELEX%3A32015D2240 [31.01.2018]

[16] See the ministerial statements and eGovernment action plans of Chapter 2 The Legal Challenges of e-Administration.

In 2012, an electronic administration supervision initiative was started to handle official duties related to SZEÜSZs. This role is fulfilled by the Minister of Interior, with the most important duties being the following:

- Initiating new provisions for SZEÜSZs and "központi elektronikus ügyintézési szolgáltatások" [central electronic administration services, hereafter: KEÜSZs].
- Reporting on draft legislations.
- Keeping the SZEÜSZs and other electronic administrative services, electronic administrative matters and electronic administrative organisations on file.
- Supervising SZEÜSZs and KEÜSZs.
- Investigating filed reports.
- Approving technical principles.
- Supervising the activity of cooperating organisations[17].
- Releasing recommendations to facilitate cooperation between various IT systems[18].

The primary national supervisory authority of e-Administration is the minister responsible for e-Administration[19], and is appointed by the government. Within the Ministry of Interior, e-Administration-related duties are handled by the Electronic Administration Supervision Department.

The *Minister of Innovation* performs the following duties:

- Directs the execution of the Infocommunications infrastructure development and service.
- Oversees the operation and development of the Infocommunications infrastructure toolset of the publicly financed institutions and state-owned economic companies that are led or controlled by the Minister of Innovation.
- Has the right of agreement regarding the personnel responsible for the Infocommunications infrastructure of said institutions, and the obligations of said personnel.
- Organizes the data processing of national data[20].

Within the ministry, a separate deputy undersecretary is in office, responsible for Infocommunications and consumer protection.

The *Head of the Cabinet of the Prime Minister* coordinates and secures the unified realisation of the Government's IT and e-Administration policy[21].

To oversee e-information security, the act created the *Nemzeti Elektronikus Információbiztonsági Hatóság* [National Electronic Information Security Authority], which started operating in 30 July 2013.

We can pinpoint several important institutions within the system of public administration. The first of these are the government windows of state administration, due

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[17] G. D. 451/2016. (XII. 19.) on the Detailed Rules of Electronic Administration (hereafter e-Administration Decree), art. 135. Available at: http://njt.hu/cgi_bin/njt_doc.cgi?docid=199341 [23.08.2017]
[18] e-Administration Decree, art. 63., para (2).
[19] G. D. of 84/2012 (IV.21) on the Appointment of Certain Organisations Related to Electronic Administration, art. 2. Available at: http://njt.hu/cgi_bin/njt_doc.cgi?docid=148204 [26.08.2017]
[20] G. D. of 152/2014 (VI. 6.) Concerning the Task and Competence of the Members of the Government, art. 114. and 118. Available at: http://njt.hu/cgi_bin/njt_doc.cgi?docid=169928 [25.08.2017]
[21] G. D. of 152/2014 (VI. 6.) Concerning the Task and Competence of the Members of the Government. art. 6, para. (1)., Point d).

to their specialties and complex task set. The second is the municipal system, especially the level of settlements, as they are the administrative level closest to the citizens. While the government windows or district offices are exposed to clients primarily during public proceedings, local administrations ensure cooperation primarily through offering local public utilities and official matters. This must be considered during strategy making and the establishment of the legal background.

Regarding the *government windows*, the creation of the single-window administration resulted in the connection of the SZEÜSZs (namely, in a centralised record management, a central delivery agent, and the usage of a secure document delivery service), the utilization of the entire functionality, further developments in the backbone network, and the creation of a knowledge base.

Regarding *local administrations*, IT is present in multiple areas, including urban development and –operations, and public utility management. This covers a much larger area than the e-Administration duties mentioned so far: it entails the creation of smart/intelligent settlemens (CSUROS, 2018), the development of various smart services, and the IT support of various community public services. All this require a separate sub-strategy during strategy making, and comprises a constantly evolving, expanding field. As Gáspár states, "*[t]he transformation of local administration expects the reinterpretation of all the [...] old and new administrative roles, and the rethink of embedding them into a changed vertical (general and specialised) and horizontal (local and regional) administrative system*" (GÁSPÁR, 2017, p. 10.).

There are also two "private operators", the *Nemzeti Infokommunikációs Szolgáltató Zrt.* [National Infocommunications Service Company Ltd., hereafter: NISZ] and the *Magyar Posta Zrt.* [Hungarian Postal Service Ltd.] that are defined as designated SZEÜSZ providers. Besides these, Eüsztv. also defines the responsibilities of e-Administration service provider organisations.

5. THE EFFECTS OF TECHNOLOGICAL DEVELOPMENTS ON E-ADMINISTRATION AND THE ORGANISATION

The rapid pace of technological development collides with the rigidity of public administration. The fast-paced development of IT, economic and societal tendencies would require a quick response from e-Administration; however, this fails to happen, because public administration, as a system, is inflexible, stiff and slow to adapt. This hinders the headway of e-Administration.

Technology also heavily affects the development and spread of e-Administration, with the recent Infocommunications achievements defining the course of development that public administration would follow. For example, cloud-based data transfer has increased six fold since 2011[22] (NEMESLAKI – SASVÁRI, 2015, p. 76.). As Budai states, "*[t]oday's trend is purchasing various back office areas as a service.*" (BUDAI, 2015, p. 57.) However, the virtualisation of IT services and the permeating presence of the Internet also provide obstacles for e-Administration; after all, the main goal is not to map

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[22] CISCO.com. (2018). *Cisco Global Cloud Index: Forecast and Methodology*. [online] Available at: http://www.cisco.com/c/en/us/solutions/collateral/service-provider/global-cloud-index-gci/Cloud_Index_White_Paper.pdf [1.10.2015].

traditional administrative procedures to the available electronic means, but instead to create a new administrative attitude, to redefine existing procedures (SÁNTHA, 2015, p. 69.), and to build in the appropriate security measures to said procedures.

Public administration therefore requires the reinforcement of its IT solutions and an increase in its electronic toolset. The CLPBS recommendations mentioned earlier have clearly defined the services that the EU specified to be mandatorily available via electronic means. Besides, it has already defined the various levels[23] of e-Administration back in the early 2000s, and aimed to align tender announcements related to e-Administration to those regulations. It also specified the public services preferred to be available via electronic means (known as the 12+8 list). Hungary introduced these stipulations in its legislation via Government Decree 1044/2005 (V.11) on The Actual e-Government Duties of Modernizing Public Administration, but realised its action points with a decade-long delay (e.g. in public procurement tenders). Nowadays, new indices are used (e.g. values on transparency, task-orientedness or interoperability), but there is room for improvements in these areas as well.

The transformation of the front and back office approaches require a stable technical background, which meets all current demands and is able to adapt to the constantly changing circumstances[24]. The SZEÜSZs were the solution to this need. They map public procedures mosaic-like with various modules and building blocks. These modules and blocks are compatible with each other, can be customised both client-side and office-side, and meet all data protection and information security regulations. Some of these SZEÜSZs are provided by government-designated service providers to guarantee stability; however, the system is open to private sector agents as well to ensure the widest possible set of services.

As mentioned earlier, the clients who would use electronic administration services also play a pivotal role in spreading e-Administration. Therefore, care must be taken to provide information on the service, and also to make sure that the front office-side tasks and the information set are technically transparent, understandable, easy to access anytime, and are always up-to-date (with all legal regulations met). To provide the required level of information, I think that two important steps must be taken. Firstly, we must financially support the development of municipal portals and the central electronic information sites. Secondly, we must train experienced personnel[25] capable of independently operating the services to ensure transparency.

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[23] COM (2002) 263 Communication from the Commission to the Council, the European Parliament, the Economic and Social Committee and the Committee of the Regions - eEurope 2005: An information society for all. Available at: http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:52002DC0263:EN:HTML [19.12.2017]

[24] According to Eüsztv. art. 25, para. (2), the organisation offering electronic administration services is using government telecommunications services when providing electronic administration services, so long as it is available and applicable to the specific scenario. See: www.njt.hu/cgi_bin/njt_doc.cgi?docid=193173 [19.12.2017]

[25] For more information, see the following tenders:
- GVOP 4.3.1. - Az önkormányzatok információ-szolgáltató tevékenységének fejlesztése, available at: http://palyazat.gov.hu/gvop_ertekelesek.
- ROP 2009 - A térségi közigazgatási és közszolgáltatási informatikai rendszerek továbbfejlesztése, available at: http://palyazat.gov.hu/content/4111.
- EKOP 3.1.6. – Önkormányzati ASP központ felállítása, available at: http://palyazat.gov.hu/doc/3459 [20.12.2017]

The possibilities provided by IT primarily aim to facilitate the work of administrators working in the back-office side. As Budai states, "*[a]lthough the back office is a pool for IT-related problems, information technology is only a necessary tool and infrastructure of modernisation. To create real e-Administration, we must consider organisational, administrative and technological questions as well*" (BUDAI, 2013, p. 56.). Therefore, by using EU, state or municipal funding, we must facilitate the development of systems that can coordinate the currently independent developments, and whose plans include connecting the specialised systems, and reinforcing cross-institutional cooperation and communication.

The primary goal in this field must be the facilitation of technological developments and the reinforcement/improvement of Infocommunications solutions to provide good quality, easy to access services. Nowadays, the related EU strategies also claim that infrastructure development alone is not enough (though it is still fundamental): service developments and quality improvements are more important. After all, by fulfilling the clients' needs, they can better support the headway of e-Administration.

Besides electronic services, a central backbone network is also required that would ensure information flow. Care must be taken to enhance the functions of this system and to prevent all of its potential problems and errors. This requires the development of user friendly, dynamic and interactive services[26].

We must meet EU expectations both regarding the *quality* and the extent of ***services***[27]. Regarding the quality, it is worth to mention *the usage of electronic applications* as an example, of which Hungarian public administration is currently utilizing three types. The first is ÁNYK [Általános Nyomtatványkitöltő, "General Form Filling Application"], an electronic application program that was first used to prepare the tax declarations of the Adó- és Pénzügyi Ellenőrzési Hivatal [Hungarian Tax Office, APEH], but was later adapted by other administrative authorities and municipalities as well, becoming much more general in usage. It has its advantages and disadvantages, with the main advantages including the following:

- Intelligent form that helps users filling its fields, but also verifies the data provided.

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[26] Such as the OkmányApp [Document App]. Available at: http://www.kekkh.gov.hu/okmanyapp/okmany-app [19.12.2017]

[27] Such expectations include the following:
- COM (2010) 245 Final: Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions: A Digital Agenda for Europe. Brussels, 19 May 2010. Available at: http://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1516639859029&uri=CELEX:52010DC0245 [21.01.2018]
- COM (2016) 179 Final: Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions: eGovernment Action Plan 2016-2020 - Accelerating the digital transformation of government. Brussels, 19 Apr. 2016. Available at: http://eur-lex.europa.eu/legal-content/HU/TXT/?uri=CELEX%3A52016DC0179 [21.01.2018]
- Ministerial Declaration on eGovernment - the Tallinn Declaration. Available at: https://ec.europa.eu/digital-single-market/en/news/ministerial-declaration-egovernment-tallinn-declaration
- Tallinn Declaration on eGovernment at the ministerial meeting during Estonian Presidency of the Council of the EU on 6 October 2017. Available at: https://www.eu2017.ee/news/insights/tallinn-declaration-egovernment-ministerial-meeting-during-estonian-presidency [21.01.2018]

- Programmable data transfer to send the provided information directly to the competent and responsible authority.
- The provided data can be automatically loaded into the specialised records of the authority, thereby simplifying and speeding up administration.

The installation and usage of ÁNYK is, however, relatively complicated, which discourages its use among the general populace.

Besides ÁNYK, the so-called ePapír [ePaper], a free text application format has also been developed. Its usage is much simpler than that of ÁNYK: it requires no download and installation, and can be used also in cases where ÁNYK is unavailable. It also allows users to add attachments, and supports the authentication of documents via the identity trace-back document authentication SZEÜSZ (though this requires manual processing).

Finally, in between ÁNYK and ePapír[28], iForm[29] is also available. Similarly to ÁNYK, it works with a structured and pre-determined set of data; however, similarly to ePapír, it does not need to be downloaded, but can be filled online. It also supports document attachments. iForm is also an intelligent application, as it auto-completes identified data.

e-Administration fundamentally requires two conditions: firstly, the relative freedom in technology, and secondly, the usage of standardised, unified administrative solutions. I have listed three means above for submitting electronic forms; it remains to be seen, which of them will become the standard in the coming years.

In today's high-speed age, the emphasis should be on *the simplification of administration, and on the usage of standardised solutions*. The electronic personal identification card (or e-ID card) also serves this purpose. On the one hand, it combines multiple identification methods in a single card, thereby offering a high level of security. On the other hand, it also stores a large set of personal data in a single card (though separately). Finally, due to its built-in storage, it is already prepared to provide additional services in the long run[30].

Authentication is of central importance in every application: not only it generates trust in clients, but it also ensures the traceability and accountability of administrative cases. Tendencies show an increased emphasis on the new e-IDs, as these cards support storing the clients' fingerprint and electronic signature, thereby enabling multi-factor authentication. In accordance with the eIDAS decree, such trust services will be accepted also on an international level. Client gate registration is also possible via the new authentication means of e-IDs; at the same time, on the back office side, their usage is frequently defined as obligatory.

Besides electronic administration, work efficiency and improved task management are also supported by the technical developments to *bridge the records of the various administrative organisations/agencies*. The systems to develop must be aligned with the systems that facilitate pan-European services and interoperability (BUDAI, 2014, pp. 303-313., KÖNIG et al., 2014a, pp. 283-295., KÖNIG et al., 2014b, pp. 295-307.). Such services, among others, include information management, document handling, archiving,

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[28] The service is currently available at https://web-lak.hu or https://epapir.gov.hu.
[29] The service is currently available at https://e-kormanyablak.kh.gov.hu.
[30] For example, the Hungarian State Railways (MÁV) developed their pass service in the Budapest-Pusztaszabolcs line based on the e-ID feature set. (KISS – SZEGO, 2017, p.64.)

filing, accessibility, and the ability to make authenticated copies. On the international (EU) level, this implies the following obligations:

- To ensure the technical background of pan-European (cross-border) public services, the European Committee has created the European Interoperability Framework (EIF) and the European Interoperability Strategy (EIS). The framework is based on the agreement of the cooperating organisations, and defines the expectations of both public administration and the private sector as well, thereby creating the conceptual model of public services, and the levels of interoperability necessary for its realisation.[31]

- It guarantees the common understanding of interoperability on the EU level.

- When creating the European public services[32], the strategy provides guidance and sets priorities regarding the activities that aim to improve the cross-border (and inter-agency) reciprocity, information sharing and cooperation among European public administration systems.

However, in case of records handling multiple identifications, care must be taken not to use inappropriate technologies that may establish connection between the various types of identifiers. This is because of Act XX of 1996 on the Identification Methods Replacing the Universal Personal Identification Number and on the Use of Identification Codes, which clearly states that using multiple identification codes simultaneously in an obligatory fashion for the same purpose is unconstitutional. Therefore, only the usage of sectoral record systems can be considered constitutional. According to Tamás Kovács A., "*in a certain sense, the main function of assembled records is to cease the separation of sectoral identifiers by essentially matching them with each other*" (KOVÁCS A., 2017, p. 67.). However, international tendencies show that the majority of member states are using unified identifiers. The new data protection regulation of the EU also allows member states to define the specific conditions of using national identification numbers and other general identifiers in a more specific fashion. Such national identification numbers and other general identifiers, however, can only be used by observing the rights and liberties of the affected subject, as guaranteed by the regulation[33].

The basics of the Hungarian regulations lie in Chapter X. of Eüsztv., which defines the organisational, technical and semantic perspectives of the cooperation as well. This is because of the actual nature of electronic data transfer between the various organisations: during such transfers, the systems communicate with each other and interpret the received data, resulting in closer cooperation and more efficient task completion among the authorities. The act also restricts the means of communication: secure electronic communication may be carried out either via availability on notice, or by the record transfer service between the various record management systems.

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[31] This framework already builds up European public services with modules, which enables the connection of services.

[32] COM (2010) 744: Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions. Towards interoperability for European public services. Brussels, 16 Dec 2010. 8.p. Available: http://www.europarl.europa.eu/ RegData/docs_autres_institutions/commission_europeenne/com/2010/0744/COM_COM(2010)0744_HU.pdf [4.08.2017]

[33] Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data, and repealing Directive 95/46/EC (General Data Protection Regulation). OJ L 119/1., pp.1-88. Available at: http://eur-lex.europa.eu/legal-content/HU/TXT/HTML/?uri=CELEX:32016R0679&from=HU [28.12.2017]

Regarding interoperability, the connection of the various systems is still a pending task, despite the fact that legal regulations have stipulated its necessity for years now. 2017 saw the inception of the Központi Kormányzati Szolgáltatás Busz [Central Government Service Bus; KKSzB] project, which aims to provide a secure interoperability forum for electronic services and data exchange, and offer a central channel for connecting file records and other IT systems. Other important background developments are also in progress, such as the improvement of the Kormányzati Adatközpont [Government Data Centre][34]. The first results of the Személyre Szabott E-ügyintézési Felület[35] [Personalised e-Administration Interface; SZÜF] are also apparent: along with the aforesaid services, it will be capable to provide true single-window administration services.

However, in parallel with the above developments (that is, the realisation of interoperability, the unified storage and connection[36] of various data, and the usage of a unified identifier), arises the question of whether these tendencies make citizens more vulnerable, pointing to the pivotal responsibility of technology in public administration affairs.

The *municipal ASP system* (GYERGYÁK, 2017, pp. 57-61.) aims to provide a unified framework in the local administration sector for municipalities, primarily on the back office side. The project offers subsystems for the following areas: records management, municipal portal, e-Administration portal, economic system, real estate equity register, taxation, industrial and commercial system, support systems, framework, inventory of estate and data warehouse. The usage of these subsystems is compulsory for all municipalities connecting to the ASP: the system offers access to the administrative applications as cloud-based services. However, a couple of additional factors should be noted here. Firstly, the usage of the system is not voluntary: legislation forced all municipalities to connect to the ASP[37]. Also, there are two levels of ASP integration: "system connection" (meaning complete integration into the ASP system), and the so-called "interface connection". The latter means that the municipalities may keep their existing systems, so long as they develop the means of data transfer to the ASP. That said, this option has notable disadvantages: the data transfer solution should be developed on the municipalities' own expense, and the funding that municipalities can apply for developing the ASP connection are also unavailable in this case (state funding can only be applied for developing system connection). However, even if a municipality undertook all the obligations of the interface connection, this level of integration could only be granted by the Minister responsible for e-Administration, who could deny interface connection applications without proper justification. According to the original deadlines of the decree, affected administrative agencies were supposed to connect to the ASP system by 1 January 2018[38] (GYERGYÁK, 2017, p. 57.). Currently, it seems this deadline will be

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[34] Digital Single Market Scoreboard. (2018). *European Commission Website*. [online] Available at: https://ec.europa.eu/digital-single-market/scoreboard/hungary#e-government [20.07.2017].
[35] Available at www.web-lak.hu or https://ekozig.mo.hu
[36] Through the assembled records.
[37] Mötv. art 114., para (2).
[38] The first stage was dated 1 Jan. 2017, the second to 1 Oct. 2017, and the third to 1 Jan. 2018. During the first stage, 1640 municipalities connected to the economic administration system of ASP2 (8 of them voluntarily), and 1678 connected to the municipal tax system (5 of them voluntarily).

delayed: county-level local administrations and the municipalities specifically defined in the decree must connect by 1 January 2019.

The enforcement of *data protection* and *security measures* should always be a priority when developing IT technologies and specialised e-Administration systems. To break down the barriers of electronic administration, it is inevitable (VÁGÚJHELYI, 2017, p. 65.) to fulfil the conditions of implementing client identification and information authentication measures. The legal background of data protection matters are defined via Act CXII of 2011 on Informational Self-Determination and Freedom of Information (hereafter: Infotv.), while the data security measures are the focal point of Act L of 2013 on the Electronic Information Security of Central and Local Government Agencies. Regarding security, it is also worth to note that efforts must be taken to create the necessary technical background that would enable the submitting, forwarding and storing of legally-protected data used in public administration.

It is apparent then, that the legal background is already available, but the rules set forth are not always enforced in practice. The reasons behind this were already mentioned: impartiality, fear, incompetence and financial/technical shortcomings all take part in this. The knowledge and competences must be expanded to effectively operate the system, to fulfil the technical and IT requirements of the front office, and to plan and implement the required ICT developments of public administration. Besides trainings, a viable way to achieve this would be the establishment of IT service provider centres.

Besides all of the above, it is not just the initiation of administrative cases that are planned to be available electronically, but also the payment options comprising the finalisation phase[39]. However, to achieve this, it is important to synchronize the payment liability records of the specific cases with the actual administrative work.

It is impossible to create a functional system with long-term viability without filtering out overlaps and creating the necessary studies or assessments. Besides utilizing the latest technological knowledge and best practices[40], the primary aim should be the *simplification of the existing procedures*. The development has already started in this area: on the one hand, with the introduction of the Services Directive in Hungarian legislation via Act LXXVI of 2009 on the General Rules of the Commencement and Performance of Service Activities (hereafter: Szolgtv.), which simplified the workflow of numerous public proceedings (for example, by making them subject to notification instead of requiring regulatory approval from the authorities); and on the other hand, by the government windows which also aim to realise single-window administration.

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[39] Via the Központi Elektronikus Fizetési és Elszámolási Rendszer (Central Electronic Payment and Accounting System; EFER).

[40] In 2007, the European Committee overviewed and evaluated the development of e-Administration in certain member states, along with their best practices. It also specified the five key areas of the i2010 eGovernment action plan, complemented the benchmarking indicator system evaluating the European development of e-Administration, and launched the epractice.eu website, containing hundreds of European best practices regarding e-Administration. For more information, see Piac és Profit. (2018). ITTK-jelentés: Az elektronikus közigazgatás. [online] Available at: http://www.piacesprofit.hu/egyeb-cikkek/ittk-jelentes-az-elektronikus-kozigazgatas [25.08. 2017]

6. CONCLUSIONS

Based on the topics covered in my study, there are three main conclusions to draw:

- Human and technical aspects can both create obstacles for the headway of e-Administration.
- Many times, a field may fail to develop even if services of the best quality are available.
- The topic of e-Administration is a complex matter that requires conscious planning and cooperation (both on the legal and IT sides).

Further developments should focus on quality instead of quantity, as the fundaments are now more or less in place, and the basic infrastructure is available in an operational state. Also, observing societal needs, public services should aim to become available on new devices (such as smartphones) via multi-platform solutions.

It is apparent that besides major plans, legislation also tries to provide considerable freedom for clients. Besides the types of e-Administration methods, this should also be emphasized by leaving the traditional (paper-based, personal) administration methods intact besides the electronic means. This is justified by two factors: to ensure equal opportunity and the fact that personal relations and communication are still important factors in administration.

Elements of the public administration reform must be imported into public proceedings by establishing an integrated, client-friendly, constantly evolving IT system, which can handle the results of both client-administrator and cross-authority electronic communication[41]. The first step of this effort was the creation of the SZEÜSZs, when the absolutism of the earlier government system was replaced with an interconnected set of modules (developed both by state-sponsored companies and private enterprises), along with technology-neutral regulations.

The involvement of the general populace, the creation and reinforcement of the public administration personnel's roleset, the procedural and organisational changes/improvements, and the transformation and alignment of the legal background to the new circumstances all require a strategic attitude, and necessitate the creation of short-, mid- and long-term strategies as well. However, due to the unpredictability and the constant evolution of this field and the ICTs involved, these strategies must be flexible, adaptable and always ready for renewal.

As an increasing number of public services become digital by default, the efficiency of the public spending on ICT solutions should be maximized by sharing and recycling known solutions.

A new interoperability environment must be created, which not only facilitates communication between European public administration systems, business enterprises and citizens, but also ensures cross-border and cross-sector interoperability.

The challenges and possibilities created by the information society are integral parts of our daily lives, and are also pivotal in improving a county's competitiveness. However, the tasks listed above require financial funds that no country can provide from its own resources. Strategic planning therefore also means the meticulous planning of the EU

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[41] Section VI of Eüsztv. on Providing Regulated Electronic Administration Services. Also, see Section IV of G.D. 451/2016. (XII. 19.) on the Detailed Rules of Electronic Administration.

funds for this purpose; this defines all directions for the next seven years that are subject for financial support.

Whenever a new study is written on e-Administration, authors tend to mention that the upcoming years may bring on important changes, and that they are looking forward to the directions the field will take in the near future. Although Hungarian e-Administration has gone through numerous developments, and already has notable improvements under its belt, the conclusion is the same in 2018 as well: we are looking forward to future developments.

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