HAL open science

Investigation of Interoperability Governance: The Case of a Court Information System

Epameinondas Troulinos, Efthimios Tambouris

To cite this version:

Epameinondas Troulinos, Efthimios Tambouris. Investigation of Interoperability Governance: The Case of a Court Information System. 12th International Conference on Electronic Participation (ePart), Aug 2020, Linköping, Sweden. pp.29-40, 10.1007/978-3-030-58141-1_3 . hal-03201963

HAL Id: hal-03201963

https://inria.hal.science/hal-03201963v1

Submitted on 19 Apr 2021

HAL is a multi-disciplinary open access archive for the deposit and dissemination of scientific research documents, whether they are published or not. The documents may come from teaching and research institutions in France or abroad, or from public or private research centers.

L'archive ouverte pluridisciplinaire **HAL**, est destinée au dépôt et à la diffusion de documents scientifiques de niveau recherche, publiés ou non, émanant des établissements d'enseignement et de recherche français ou étrangers, des laboratoires publics ou privés.

Distributed under a Creative Commons Attribution 4.0 International License

Investigation of interoperability governance: The case of a Court Information System.

Epameinondas Troulinos[1] and Efthimios Tambouris [2]

[1] Administrative Court of First Instance at Serres, K. Karamanli 53, Serres, Greece, etroulinos@adjustice.gr
[2] University of Macedonia, Egnatia 156, Thessaloniki, Greece, tambouris@uom.gr

Abstract. The latest version of European Union's European Interoperability Framework (EIF 2017) introduced the concept of 'interoperability governance' as a key enabler of interoperability. The paper examines this concept in an information system for the judiciary. It particularly explores how the governance structure of the Integrated Administrative Court Case Management System of Greece affected the decisions regarding interoperability. We use a case study methodology to achieve this goal. Our findings are consistent, in most parts, with the conceptual model of EIF 2017. We affirm that the requirement of independence of the judiciary imposes certain limits that have to be respected in an interoperability governance structure of the courts. We emphasize on the importance of dealing with certain issues of interoperability before the introduction of an information system in the judiciary. We conclude that a 'dynamic' governance structure, that is a structure that changes during the life cycle of an information system, is consistent with real world challenges that arise regarding interoperability.

Keywords: Interoperability, Interoperability Governance, Administrative Justice.

1 Introduction

Several countries introduced ICT in their justice systems in order to improve both the efficiency of justice and accessibility to justice. For digital technology to be efficient for justice, it is necessary to encourage the secure flow of data between various IS; i.e. the data should circulate and be used easily. Different IS, both within and outside the judiciary, need to be made interoperable.

EU noticed the need for interoperable IS so as to deliver integrated public services to EU citizens. It regards interoperability "a key factor in making a digital transformation possible" since it "allows administrative entities to electronically exchange, amongst themselves and with citizens and businesses, meaningful information in ways that are understood by all parties" [1]. Furthermore, the latest version of the European Interoperability Framework (henceforth, EIF 2017) recognizes 'interoperability governance' as a "the key to a holistic approach on

interoperability, as it brings together all the instruments needed to apply it" and defines it as "decisions on interoperability frameworks, institutional arrangements, organizational structures, roles and responsibilities, policies, agreements and other aspects of ensuring and monitoring interoperability at national and EU levels" [1, Annex 2]. It further underlines the importance of political support and in-house skills to successfully implement interoperability policies and introduces a six-step-approach to manage standards and specifications.

Many public administrations were affected, as regards their system of organization, by the Weberian model and then shifted to the theoretical model of 'New Public Management' [2, with further citations]. The latter model was criticized [3] and the concept of 'governance' was introduced [2, with further citations] which "involves systematically determining, within a given scope, who makes each type of decision (decision rights), who provides input (input rights), and how people (or groups) will be held accountable for their role (accountability)" [4, with further citation].

Particularly in the judiciary, its governance structure is of extremely importance because it is related to the independence of courts; that is the need to guarantee judicial independence from the legislative and the executive branches of government. We assumed it is unlikely that a single form of governance will practically address all the issues regarding an IS for the judiciary. Since the judiciary does not usually have a specific governance structure for matters of interoperability or even for technology issues, the governance structure that it already has influences the governance structure that deals with interoperability issues. Therefore, it is crucial –from a governance point of view- to consider who is responsible for making the decisions that relate to interoperability (e.g. on technical and semantic standards, on necessary organizational and legal changes) and how it is ensured that they are adhered to. The aim of this paper is to examine the aforementioned issues in the governance structure of the Integrated Administrative Court Case Management System of Greece (henceforth, IACCMS); the IS that was introduced on 2015 in administrative justice of Greece. The relevant questions we wanted to explore were: 'what' were the main decisions regarding interoperability, 'who' had the mandate to make them and 'how' those decisions were implemented.

2 Related Work

Several works treat the problems of interoperability governance and governance of the judiciary.

On the issue of interoperability governance, [5, 6 and 7] agreed that the central questions to be answered regarding 'governance' in IS are: 'what' are the main decisions, 'who' has the mandate to make them and 'how' those decisions are implemented. The 'who' question also addresses the issue of whether an existing actor or a new –permanent or temporary- actor will deal with those issues. Furthermore, the above mentioned authors agreed to three basic forms of governance for IS: a 'hierarchy', which refers to a central planning authority, a 'network', which refers to separate agencies that negotiate rules and a 'market', which refers to

outsourcing of the operation of certain services. This observation is also consistent with institutional economic theory [8] as well as public management theory [9]. Other research, developed a definition of interoperability governance from a literature review and further developed a model template for interoperability governance - which is similar to the Control OBjectives for Information and related Technology (COBIT) framework from the Information Systems Audit and Control Association (ISACA)- and tested it examining case studies in EU member states [10].

Several authors examined the concept of 'interoperability governance' and particularly the issue of the competent governing body. In a case study of a Swedish portal for business registration and management an argument was made in favor of a 'hierarchy' though in the concluding remarks it is stated that "in some cases, decentralization strengthens the integrity of the individual and autonomous actors, while in other cases it weakens actors by creating lock-in effects due to inflexible structures" [11]. However, in a case of the City of Munich overhaul of its ICT structures that focused on the dimension of governance, an argument was made in favor of a 'network' [12]. The same argument was supported on a presentation of the Danish approach to governance structures as regards the digital transformation of the public sector [13]. On the other hand, in a study of five cases of integrated electronic service delivery in Quebec, an argument was made in favor of a mixed governance structure [14]. The authors specifically introduced the concepts of 'vertical governance', i.e. "a management method that is hierarchically organized and structured according to formal rules laid down by the center" and 'horizontal governance', i.e. "a method of administration based on trust and collaboration among a network of organizations with no or little authority between them, with the aim of offering joint solutions to often complex problems" [14, with further citations]. The authors concluded that there are limits to horizontal governance structures and in order to overcome them they proposed the addition of vertical governance mechanisms, such as a central coordinating authority, that would be responsible for setting interoperability standards, modernizing administrative processes and providing a clear digital strategy.

Recently (January 2020), there was a proposal for a four step roadmap in order to develop a new integrated public service [15]. Regarding interoperability governance it stressed the importance of building political momentum and support (1st step, detect the need for change). It further indicated that the relevant governance structures should be set up during the next phase (2nd step, plan and select), without referring to any model of governance structure. Additionally, it suggested setting standards along with the overall framework (3rd stage, provide framework and set standards), then monitor the performance of the integrated service (4th stage, monitor and maintain) and, pursuant to the circumstances, begin the roadmap again.

On the issue of governance of the judiciary, the conclusion of studies of various Committees of the Council of Europe is that countries should opt for a 'hierarchical' form of governance involving judges in the relevant decisions. Thus, the Consultative Council of European Judges observed that "over dependence on technology and on those who control it can pose a risk to justice" and that "IT governance should be within the competence of the Council for the judiciary or other equivalent

independent body" [16]. Additionally, the European Commission for the Efficiency of Justice considered essential to have a form of centralization, (through a hierarchical model) for successful IT development in the judiciary, though not all member states of the Council of Europe opted for this form of governance [17]. The same advisory body in another report, emphasized the assembly of multidisciplinary teams (technical and legal professionals) "that has real managerial and operational freedom", but also stressed the importance of having a legal professional as a leader who, if necessary, will re-orientate the technical solutions according to the needs of the courts and bearing in mind the legal challenges [18]. Accordingly, the latter report proposed "the adoption of a single, simple, clearly defined system of governance that makes it possible to separate the management of the project from the rest of the administration" and advised the creation of 'temporary' governing bodies with cross-sectoral personnel that operate the court IT system throughout its lifecycle.

The above mentioned works cover either issues of interoperability governance in the private / public sector or the governance structure of the judiciary in the introduction of an ICT project. Our understanding is that the literature is fragmented and is not using a common framework. Usually the authors either introduce a new framework or base their examination in frameworks of other fields. This could lead to inconsistency and is difficult for the reader to thoroughly follow the results of each research. We hold that it is imperative to have a consistent framework to examine interoperability of information systems and we presume that, at least in Europe, EIF 2017 is a good starting point. Regarding the model of governance, there is an agreement to the three basic forms (hierarchy, network and market). In our literature review –that included a sequential investigation of the references of the above mentioned works- we did not identify any case study on the governance structures that the judiciary established in order to promote interoperability, which is the issue we examine in this paper.

3 Methodology

In order to examine the way the competent bodies reached decisions about interoperability issues of IACCMS we used the qualitative technique of case research strategy in studies of information systems [19]. Our aim was both to explore the way the governance structure of IACCMS affected interoperability decisions and validate EIF's 2017 recommendations on this issue.

The unit of analysis is IACCMS; it meets the three criteria for this method to be viable, namely: a) one of the authors, who is an administrative judge in Greece can study IACCMS in its natural setting, b) we can understand the nature and complexity of the processes taking place and c) we examine an area (interoperability in Information Systems of the judiciary) in which few previous studies have been carried out. Moreover, for the chosen unit of analysis the case study research, which aims at the conduct of research, is a more appropriate method than application descriptions, which analyze a researchers' experience in enforcing a particular application, or

action research, in which a researcher is both a participant in the actualization of a system and an evaluator of an intervention technique [19].

IACCMS was introduced in Administrative Justice of Greece on 2015. Before that only the Supreme Administrative Court (called Council of State, henceforth, CS) had an integrated case management system. CS, which pursuant to the Greek Constitution has the authority for the management of administrative justice, established an IT Committee consisted of judges and an ICT Division within the registrar of the court consisted of court officers with IT background. The computerization of the rest of administrative courts was fragmented, since each court was perceived (from an IT point of view) as an autonomous entity; that is each court was responsible both for the administration of its data and for the communication with external users (including other administrative courts). Also, there was a lack of IT personnel. The inconsistencies of this fragmentation had as a result the decision to introduce an integrated court case management system for administrative justice.

Therefore, our case study (which is a single-case research) was a unique opportunity to study the governance structure of an IS from planning phase up to the operational phase. It was also a critical case to test EIF 2017 and, essentially, towards building theory in interoperability governance which is still in its developmental stages. IACCMS had a twofold way of dealing with interoperability issues: i) regarding existing IS of administrative courts, an integration of all -formerly isolated-systems into the new one, ii) regarding external IS, the establishment of interoperability. The relevant questions in our case study were: 'what' were the main decisions, 'who' had the mandate to make them and 'how' those decisions were implemented. Those questions also point to the case study as an appropriate research method [19, table 1].

Following the positivism model, our aim was to "generate data which are valid and reliable, independently of the research setting" [20]. We collected data from many sources so as to triangulate the information we derived from them and to support our findings. The data were collected between May 2019 and July 2019 from: a) archival records (in Greek): the public procurement and the contract notice of IACCMS, as well as the contract of 2005 regarding the computerization of eleven administrative courts of first instance (previous IT project in administrative justice), b) documentation (in Greek): the guidelines, via emails, that the Central Organizational Committee (henceforth, COC) issued during the transition and operational phases of IACCMS, the documents (deliverables) that the contractor issued regarding the interoperability of IACCMS and relevant legislation, c) a physical artifact: the Interoperability Quick Assessment Toolkit (IQAT), that was developed from the ISA² Program of the European Commission and d) direct observation: due to the fact that one of the authors is an administrative judge in Greece, he was able to observe the day-to-day operation of the system, discussing relevant issues with court officers from the registrar of the court as well as with the president of COC and with a court officer of the ICT Division of the registrar of CS; those discussions were not unstructured (or open-ended) interviews, though the author tried to be 'active listener' and after each discussion he took notes (in Greek) of relevant issues that were clarified; the data from this category represent that author's interpretation of what has been observed.

4 Results

In the following table our findings of the case study are briefly presented. They are thoroughly discussed in the following two subsections, which follow, in a linear way, the phases of the project.

Stakeholders	Decision Making Process	Legal interoperability	Organizational interoperability
Before Initiation of the Project			
Political Actor	Hierarchy, grant authority, do not interfere	Establish legal framework in which standards are set for all layers / time frame	There is no need for interoperability agreements
Competent Centralized Authority	Informal collaboration with political actor (goal alignment)		
Planning Phase			
Competent Centralized Authority	Hierarchy, evaluate previous experience and build on existing infrastructure	Use standards set by law	Get users feedback in advance
Piloting Phase and Operational Phase			
Competent Centralized Authority	Set up new bodies if needed and collaborate. Retain hierarchy in a network structure that facilitates consultation		Goal alignment between organizations and respect independence of organizations

Table 1. Matrix of Findings

4.1 Before the initiation of IACCMS (planning phase)

The Ministry of Justice, Transparency and Human Rights supervises the administration of justice, dealing with organizational issues, the infrastructure and provides economic (through the budget of the State) and administrative support to the judiciary. It assessed previous ICT projects in administrative justice, consulted with CS and opted for a central governance structure for the planning, procurement, operation and maintenance of IACCMS, without further intervening in the project. It decided that CS would lead the project of introducing a new IS for administrative justice. That political decision had a positive effect in establishing an efficient governance structure for the project and further enabling interoperability. Thus, it is valuable to assess (and learn) from previous ventures before pursuing a new one.

Furthermore, CS had valuable institutional knowledge, since: i) it successfully introduced a case management system for its operations as early as 2006, and ii) it is, pursuant to the Greek Constitution, entitled to oversee the rational operation of administrative justice. Thus, an important lesson is to use an established body with prior experience and the authority (mandate) to lead the project. The knowledge derived from the experience of previous projects –which were introduced, without

central coordination and cooperation between courts- was also evident in the decision to build on existing infrastructure, since IACCMS is in essence an evolution of the integrated case management system of CS.

The involved stakeholders (judges and court officers of other administrative courts) generally recognized that a coordinating authority was needed to issue directives and to guide them especially during transition from piloting to operational phase; nearly all stakeholders understood that they would benefit of an integrated public service delivery that IACCMS would provide to administrative justice. However, the 30.03.2015 written communication of the President of CS indicates that not all stakeholders shared the same enthusiasm for IACCMS.

Moreover, an essential lesson is to solve as many issues as possible at the legal level, before implementing a project either for introducing a new IS or further developing an existing one. The Greek Interoperability Framework was introduced with a ministerial decision on 2012. It was compliant with the European Interoperability Framework of 2010. CS has ruled (Opinions 19/2012, 38/2013 and 252/2013 on Presidential Degrees regarding e-justice), that this legal framework does not directly apply to courts, public prosecutors offices and their registrars, though it is useful to be considered on issues of e-justice because it regulates similar issues. Hence, CS decided that IACCMS should be designed in order to be compliant with that particular framework and so there was not a need for drafting interoperability agreements. Thus, there seems to be a correlation between the setting of standards by law and the need for interoperability agreements. It is also useful to enact the relevant legislation that makes an ICT solution mandatory within a specific time frame. Thus, the competent authorities will have a mandate to introduce the new IS within specific boundaries and will also have sufficient time to configure it, test it in a piloting phase, assess the feedback and roll it out. Such an approach will also resolve interoperability problems related to a lack of willingness to collaborate, that some stakeholders may have. Therefore, it is helpful if all users are heard before the relevant legislation is enacted.

4.2 During the implementation of IACCMS (piloting and operational phases)

Although CS was a key enabler in the new project, it acknowledged, during the piloting phase of the project that it could not sufficiently address all the issues that the other administrative courts had to deal with in order to incorporate IACCMS. There were problems during the transition of existing IS to IACCMS and also during the introduction of IACCMS to courts that did not support an IS.

The General Commission of the State for the Regular Administrative Courts, which is a separate branch of senior administrative judges, monitors the operation of administrative courts and assists them without interfering with their judicial task. It established COC, which was a new informal permanent body that addressed the above described issue. Also, two informal ad hoc Committees, nine informal Committees at the administrative court of appeals and further an informal working group were set up to deal -for a limited period- with specific topics that arose. The lesson is that the governance model should be able to change due to unforeseen issues, that are

observed during the piloting phase of an IS or the transition from an older version of an IS to a new one. We therefore understand that 'interoperability governance' is successful when it is 'dynamic' not 'static'. It is a key factor of success to include all stakeholders (in this case through a proxy, COC) in the process of introducing a new IT system, though a leading stakeholder (in this case CS) is needed so as to drive the project forward. In essence, CS provides strategic direction, whereas CS consults COC in issues regarding the other administrative courts so as to coordinate the activities of IACCMS. Our view is that the governance structure of IACCMS is not a duopoly, though it has many aspects of a network, especially when addressing change management and day-to-day management issues; the network aspects of the governance structure were developed because of the issues that had to be addressed during the rolling out of IACCMS. We argue that it is a hybrid structure, since it is flexible enough to establish new temporary or permanent bodies to address issues of greater importance or to realign the management responsibilities between CS and COC. Although the governance structure shifted during the different phases of the project from a decision making perspective it remained a hierarchy. It was the collaboration between COC and CS that established clear and direct communication channels (including regular meetings) during transition from piloting to operational phase of IACCMS. The data we collected point to COC having concurrent competence to take initiatives regarding the implementation of changes to IACCMS at other administrative courts within the goals that CS sets.

Additionally, at the organizational level, interoperability between two IS, is more easily achieved if the incentives of the two organizations are aligned to a mutual goal. In our case study lawyers, judges and court officers were willing to establish a service for the electronic filing of a case. Both IACCMS and the lawyer's portal respected the independence of each other and so the latter portal was built as a single point of access for the lawyers, who upload their files once and the two systems only exchange relevant data. The separate design of the systems renders easier to standardize the relevant processes and also addresses separately maintenance issues. Therefore, tasks are easier attributed when the boundaries of IS are clear. Since parties, after the e-filing of a case, can also submit documents physically to the court, IACCMS provides a multichannel service delivery; it integrates both offline and online channels.

The following figure displays the shifting of the governance structure of IACCMS during the different phases of the project. We assume that in case the IS has to be expanded the same phases will be followed.

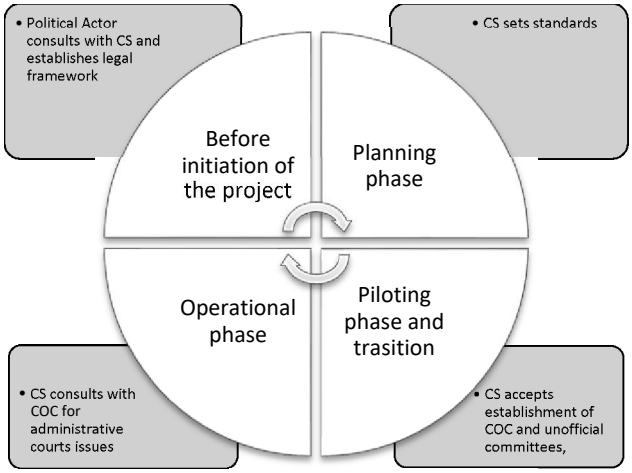

Fig. 1. Governance structure of IACCMS during the phases of the project

5 Discussion

Pertaining to two of our research questions ('who' had the mandate to make the main interoperability decision and 'what' were they), CS is the competent authority to deal with interoperability decisions regarding IACCMS. Judges were members of the IT Committee and the Tender Committee and they made all the relevant decisions, particularly: 1) the decision to centralize and integrate legacy systems in the new IS, 2) the decision to interoperate with external IS by accepting standards regarding technical, semantic and organizational interoperability that had been set via legislation; this finding reveals that there is a trade-off between imposing standards through legislation and drafting interoperability agreements that distribute responsibilities among organizations that want to interoperate and 3) the decision to build on existing infrastructure and expand it; a decision that was consistent with underlying principle 4 of EIF 2017 'reusability'.

Regarding our third research question ('how' the interoperability decisions were implemented), our findings pointed that a strict hierarchy was not able to cope with this issue. During the piloting phase of the project problems –not previously anticipated- revealed themselves and thus the governance structure was altered. There were new informal bodies that were set up and one of them, COC, continued to have a permanent role even after the issues that had to deal with were resolved; regarding interoperability the crucial issue was the introduction of the e-filing of the case from lawyers' portal to IACCMS. Thus, one useful finding is that the way interoperability decisions were introduced (the 'how' question) affected the bodies that were responsible for the decisions (the 'who' question).

We identified as a factor of success of IACCMS, its 'dynamic' governance structure. The governance bodies were not set up at once but they evolved during the life cycle of the project, especially at the time that problems were identified. The

introduction of a proxy for all stakeholders (COC) facilitated the rolling out of IACCMS to all administrative courts. However, the governance structure remained a hierarchy since CS has the final say on all decisions, including those regarding interoperability, though it consults COC for issues affecting the rest of administrative courts. Those findings correspond with the proposal for a governance model to coordinate inter-organizational relationships that uses both vertical governance (hierarchy) and horizontal governance (network) [14]. Furthermore, those findings correlate with the statement that "interoperability in government needs a resilient and flexible model of IT governance, which helps advance the political, institutional and functional opportunities over time" [7]. Still, [15] implies that governance bodies should set up at the planning phase; on the contrary, our findings point to a continuous restructuring of the governance structure in order to deal with interoperability issues that may arise at different phases of a project. Therefore, the model of governance is important and affects interoperability decisions; hence a 'dynamic' model of governance -that is a centralized governance structure (hierarchy) which consults through a proxy with all stakeholders (network)- is better able to address interoperability decisions.

Also our results point that one of the factors of success of IACCMS was the alignment between the aim of the judiciary and a political priority (efficiency of justice) at an early stage. Many stakeholders anticipated an integrated case management system for all administrative courts and the political actor rode the momentum providing the necessary funding. This finding corresponds to EIF's 2017 view [1, Annex 2] that political support is needed for a successful cross-sectoral interoperability project; in our research interoperability between IACCMS and the lawyer's portal for the e-filing of a case. It also corresponds to the first step that [15] proposes. However, we did not identify any recommendations on EIF 2017 regarding the model of governance for interoperability issues, unless one views the term "holistic governance" as encompassing the aforementioned findings. Therefore, our research contributes to building theory and in essence supplementing EIF 2017 on the issue of interoperability governance.

Furthermore, the Ministry of Justice, Transparency and Human Rights enshrined the constitutional guarantee for an independent judiciary and the recommendations from European judiciary organizations that emphasized the importance of having judges actively involved in an ICT project concerning them [16, 17 and 18]. Our findings suggest that the independence of justice is a principle that imposes limitations on the competent authorities (the 'who' question) that make the relevant decisions regarding the interoperability of an IS for the judiciary.

This research could be extended in order to explore governance structures of other IS of the judiciary both inside and outside Greece. Further research could particularly investigate whether apart from a 'dynamic' governance structure, where judges are actively involved, other governance models could successfully be implemented in the introduction of an ICT project in the judiciary, fostering interoperability and without hindering the independence of justice.

6 Conclusions

From the case study we can deductively infer that the 'dynamic' governance structure (agile approach) of IACCMS serves as a strong example for public administrations, especially the judiciary, to model. In this way a centralized authority improves the coordination and efficiency of the network. We conclude that governance, not development, is the most difficult issue to solve. Pursuant to the data we collected our findings suggest it is decisive that the competent authority in the governance structure of an IS has some flexibility in the running of the project, so that, it opts for ad hoc solutions that fulfil the organization's requirements for interoperability. We further affirm the observation of the European Commission for the Efficiency of Justice that: "Changes in the field of cyberjustice should be court-driven, not technology-driven. This implies that organizations must be able to set modernization objectives free from any concerns related to the information technology itself. This is an essential condition for the success of any project, without which there is a risk that it will fail to serve the interests either of those who use the courts or of those who work in them and will, if anything, ultimately undermine confidence in the judiciary as an institution" [18].

References

1. European Commission: Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions, European Interoperability Framework – Implementation Strategy, COM(2017) 134 final, Brussels, 23.3.2017.
2. Lambropoulou M. and Oikonomou G.: Theoretical models of public administration and patterns of state reform in Greece. International Review of Administrative Sciences, Vol. 84(I), 101-121 (2018). DOI: 10.1177/0020852315611219.
3. Mongkol K: The critical review of new public management model and its criticisms. Research Journal of Business management 5(10), 35-43 (2011). DOI:10.3923/rjbm.2011.35.43.
4. Leclercq-Vandelannoitte A. and Bertin E.: From sovereign IT governance to liberal IT governmentality? A Foucauldian analogy. European Journal of Information Systems, Vol. 27(3), 326-346 (2018). DOI: 10.1080/0960085X.2018.1473932.
5. Weil P. and Ross J.W.: IT Governance: How Top Performers Manage IT Decision Rights for Superior Results. Harvard Business School Press, Boston (2004).
6. Kooper M.N., Maes R. and Lindgreen R.: On the governance of information: Introducing a new concept of governance to support the management of information. International Journal of Information Management Vol. 31(3), 195–200 (2011). DOI:10.1016/j.ijinfomgt.2010.05.009.
7. Kubicek H., Cimander R. and Scholl H.J.: Organizational Interoperability in E-Government Lessons from 77 European Good-Practice Cases, Springer (2011).
8. Estermann B., Riedl R. and Neuroni A.C. "Integrated" and "Transcendent" E-government: Keys for Analyzing Organizational Structure and Governance [online], available from https://www.researchgate.net/publication/221584693_Integrated_and_transcendent_e-

government_keys_for_analyzing_organizational_structure_and_governance, last accessed 2019/09/02.
9. Provan K.G. and Lemaire R.H.: Core Concepts and Key Ideas for Understanding Public Sector Organizational Networks: Using Research to Inform Scholarship and Practice. Public Administration Review, Vol. 72(5), 638–648 (2012). DOI: 10.111/j.1540-6210.2012.02595.x.
10. Wimmer M.A., Boneva R. and di Giacomo D.: Interoperability governance: A definition and insights from case studies in Europe. In: DG.O 2018: Proceedings of the 19th Annual International Conference on Digital Government Research, May 30-June 1, 2018, Delft University of Technology, Delft (2018). DOI:10.1145/3209281.3209306.
11. Sundberg L.: Enablers for Interoperability in Decentralized e-Government Settings. In: DG.O 2018: Proceedings of the 19th Annual International Conference on Digital Government Research, May 30-June 1, 2018, Delft University of Technology, Delft (2018), DOI:10.1145/3209281.3209303.
12. Scholl H.J. and Alawadhi S.: Creating Smart Governance: The key to radical ICT overhaul at the City of Munich, Information Polity, Vol. 21(1) 21–42 (2016). DOI:10.3233/IP-150369.
13. Nielsen M.M., 2019, Governance lessons from Denmark's digital transformation. In: DG.O 2019: Proceedings of the 20th Annual International Conference on Digital Government Research, June 18-June20, 2019, Mohammed Bin Rashid School of Government Dubai; United Arab Emirates, 456-461 (2019). DOI:10.1145/3325112.3329881.
14. Boudreau C. and Bernier L.: The implementation of integrated electronic service delivery in Quebec: the conditions of collaboration and lessons, International Review of Administrative Sciences, Vol. 83(3), 602–620 (2017). DOI: 10.1177/0020852315598215.
15. European Commission: EIF Roadmap. How to deliver a new integrated public service [online], available from https://joinup.ec.europa.eu/collection/nifo-national-interoperability-framework-observatory/document/eif-infographic-roadmap-developing-new-integrated-public-service, last accessed 2020/03/10.
16. Council of Europe, Consultative Council of European Judges: Opinion No.(2011)14 of the CCJE "Justice and information technologies (IT)", Adopted by the CCJE at its 12th plenary meeting (Strasbourg, 7-9 November 2011), CCJE(2011)2 Final.
17. Council of Europe, European Commission for the Efficiency of Justice: The use of the information technologies in European courts - CEPEJ Studies No. 24, adopted by the CEPEJ at its 27th plenary meeting (Strasbourg, 30 June-1 July 2016), [online], available from https://rm.coe.int/european-judicial-systems-efficiency-and-quality-of-justice-cepej-stud/1680788229, last accessed 2019/09/02.
18. Council of Europe, European Commission for the Efficiency of Justice: Guidelines on how to drive change towards Cyberjustice. Stock-taking of tools deployed and summary of good practices, as adopted at the 28th meeting of the CEPEJ on 7 December 2016, [online], available from https://edoc.coe.int/en/efficiency-of-justice/7501-guidelines-on-how-to-drive-change-towards-cyberjustice-stock-taking-of-tools-deployed-and-summary-of-good-practices.html, last accessed 2019/09/02.
19. Benbasat I., Goldstein D.K. and Mead M.: The Case Research Strategy in Studies of Information Systems, MIS Quarterly, 1987, Vol. 11(3), 369-386 (1987).
20. Silverman D.: Interpreting Qualitative Data. Sage (5th edition), Los Angeles - London – New Delhi – Singapore – Washington DC (2014).