

Digitalisation of Public Spatial Planning and Construction Proceedings within the Sustainable Development Goals

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Abstract

The issue of finding an optimal model for the operation of public administration, both in terms of its internal organisation and its relationship with stakeholders, remains current and complex. However, the Information Age brings with it the potential for significant improvements. Modern electronic tools offer numerous methods and techniques for optimisation and enhancing the operation of public administration. As information technology becomes a part of daily life and impacts all activities and policies, the general public demand for digital services logically increases. Consequently, using new technologies in decision-making processes attracts research interest across several European countries. Similar development focuses on advanced information systems that enable the digitalisation of spatial planning and construction proceedings. The authors examine the digitalisation of public space, accentuating its interconnectedness with the Sustainable Development Goals. The paper also aims to share experiences from the ongoing digitalisation of construction proceedings and spatial planning in the Czech Republic. The authors describe potential benefits from the perspectives of public authorities and users of the public administration, providing practical insights into the advantages of digitalisation. The paper concludes by outlining prerequisites and challenges for the successful implementation in the daily practice of public administration and its users. The authors highlight the legal framework of the future building administration system. The authors exploit the desk research methodology and their experience in academia and legal practice.

Keywords: digitalisation, sustainable development goals, public administration, information systems, building and spatial planning.

JEL Classification: K23, K32

DOI: <https://doi.org/10.62768/ADJURIS/2024/3/09>

Please cite this article as:

Fiala, Zdenek, Olga Sovova & Kristyna Mlezivova, „Digitalisation of Public Spatial Planning and Construction Proceedings within the Sustainable Development Goals”, in Wilson, Paulina E., Marijana Mladenov & Jelena Trajkovska-Hristovska (eds.), *Resilience and Reform: Administrative Law and Public Policy in a Changing World*, ADJURIS – International Academic Publisher, Bucharest, Paris, Calgary, 2024, p. 132-145.

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1. Introduction

The paper argues the legal and administrative needs when implementing the digitalisation of construction proceedings and spatial planning. Urbanisation and climate change are among the most important trends shaping global development in the decades ahead. Cities and their inhabitants serve as engines of change and drive economic and social progress than at any other time in history. However, urbanisation and climate change could undercut all this by exacerbating resource scarcity and putting vulnerable communities at environmental risk.⁴

Consistent knowledge about urbanisation and its internal structure is of extreme importance. Although less than 3% of the Earth's land areas are urban, the movement of population into cities and the transformation of land cover into urban forms is proliferating. This constant development highly impacts biodiversity and surface conditions. Urbanisation covers agricultural and forest land with impermeable materials, buildings, and waste.⁵ As key drivers of global environmental change, cities demand the attention and action of public authorities, local public administration, and the inhabitants and users of public administrative tools.

The role of these social groups in shaping the future of our cities and their impact on the environment is paramount. By understanding their role and taking appropriate actions, these entities can contribute significantly to sustainable urban development.

Digitalisation, or digital technologies to transform business processes, is crucial in modernising public services. It enables remote access to public authorities and the administration of public space and construction activities. The provision of public services by electronic means must be beneficial to both parties involved, i.e. users and digital service providers. From the point of view of public authorities, the potential of digitalising administrative agendas in general lies in reducing operating costs, whether in terms of the number of employees, need for physical space or other material costs, accelerating and simplifying the process of providing the service, limiting contact with the user of the service, guaranteeing compliance with regulations and procedures, higher satisfaction of users of the service, or reducing the error rate of the data provided. For recipients of public administration, digitalisation means reaching services outside the institution's

⁴ Demuzere, M., Kittner, J., Bechtel, B. „LCZ Generator: A Web Application to Create Local Climate Zone Maps”, *Frontiers in Environmental Science*, Vol. 9 Original Research, published: 23 April 2021. Available online at <https://doi.org/10.3389/fenvs.2021.637455>. Accessed 8 May 2024.

⁵ Bechtel, B., Alexander, P.J., Böhner, J. et al. „Mapping Local Climate Zones for a Worldwide Database of the Form and Function of Cities”, *ISPRS International Journal of Geo-Information*, 2015. Vol. 4, pp. 199–219. Available online at: <https://doi.org/10.3390/ijgi4010199>. Accessed 8 May 2024. See some interesting effects in Seehaus, S. and Peráček, T., „The Impact of the Constitutional Court Ruling of 15 November 2023 on the Federal Government's Budget Planning and the Potential Increase in Insolvency Cases in Germany”, *Juridical Tribune – Review of Comparative and International Law* 14, no. 2 (June 2024): 178–195.

working hours, which saves users' time, increasing the quality of the selected service in the sense of clear and correct data, availability of remote access, and the possibility of monitoring the course of the service provided. That is why it is unavoidable for the state to reflect the needs of the recipients of public administration when introducing new and developing existing electronic tools and services in public administration. The public administration must offer the services the users are interested in. The authors have already alerted in their research about the need for digital transformation in public services and provided insights into the potential benefits, risks and challenges.⁶

2. Sustainable development goals and the digital public space

In 2015, the United Nations General Assembly completed the effort for global sustainable development by adopting the 2030 Agenda for Sustainable Development.⁷

Goal 9 – Build resilient infrastructure, promote inclusive and sustainable industrialisation, and foster innovation. Goal 11 – Make cities and human settlements inclusive, safe, resilient, and sustainable, which form the main targets of public spatial planning. Of course, these two goals cannot be separated from the others as sustainable development is a global concern and collaborative undertaking.⁸ The digital public space, as described below, helps to reduce repercussions on ecosystems and enables better and inclusive access to public authorities.⁹

The authors underline the applicability of Davis's general technology acceptance model, based on the theory of reasoned action, in introducing information technology into public administration.¹⁰ According to this model, the individual's attitude to information technologies and their actual use depends primarily on how the user perceives their usefulness and the ease (complexity) of working with them. Similarly, Rogers's diffusion of innovation theory explains the success of introducing new technologies into practice.¹¹ According to this,

⁶ Sovová, O., Fiala, Z. *Challenges of Public Administration in the Global Digital Era*. In Cazala, J., Zivkovic, V. (ed.): *Administrative Law and Public Administration in the Global Social System*. ADJURIS – International Academic Publisher. 2021. pp. 138–146. Available online at http://www.adjuris.ro/editura_en.html. Accessed 8 May 2024.

⁷ Available online at: <https://sdgs.un.org/2030agenda>. Accessed 8 May 2024.

⁸ Nakamura, M., Pendlebury, D., Schnell, J., Szomszor, M. *Navigating the Structure of Research on Sustainable Development Goals*. Institute for Scientific Information, April 2019, p. 11. Available online at: https://clarivate.com/wp-content/uploads/dlm_uploads/2022/09/Navigating-the-Structure-of-Research-on-Sustainable-Development-Goals.pdf. Accessed 8 May 2024.

⁹ See especially SDG 13 and 17. Available online at: <https://sdgs.un.org/2030agenda>. Accessed 8 May 2024.

¹⁰ Davis, F. D. „Perceived usefulness, perceived ease of use and user acceptance of information technology”. *MIS Quarterly*, 1989. Vol. 13, No. 3. pp. 319–340. Available online at: <https://www.jstor.org/stable/249008>. Accessed 8 May 2024.

¹¹ Carter, L., Bélager, F. „The utilisation of e-government services: citizen trust, innovation and acceptance factors”, *Information Systems Journal*, 2005. Vol. 15. No. 1, pp. 5–25. Available online

the following factors are decisive: relative advantage over the previous technology, complexity of the technology from the user's point of view, compatibility with the needs of those who are supposed to use it, credibility, and safety.

The provision of public services by electronic means must be beneficial to both parties involved, i.e. users and digital service providers. From the point of view of public authorities, the potential of digitalising administrative agendas in general lies in reducing operating costs, whether in terms of the number of employees, need for physical space or other material costs, accelerating and simplifying the process of providing the service, limiting contact with the user of the service, guaranteeing compliance with regulations and procedures, higher satisfaction of users of the service, or reducing the error rate of the data provided. For recipients of public administration, digitalisation means reaching services outside the institution's working hours, which saves users' time, increasing the quality of the selected service in the sense of clear and correct data, availability of remote access, and the possibility of monitoring the course of the service provided. That is why it is inevitable for the state to reflect the needs of the recipients of public administration when introducing new and developing existing electronic tools and services in public administration¹².

Projects aimed at digitalising construction proceedings and spatial planning are a step in the right direction. First, the authors emphasise that it cannot be just the 'mere' digitalisation of the construction proceedings but rather the digitalisation of the preparation and implementation processes of capital construction in the territory.

The processes that precede or are directly associated with the actual submission of the application for a building permit should also be digitalised, including the assessment of plans or projects by the authorities concerned and the owners of transport and utility infrastructure. Only in this way can the decision-making process be short and methodological procedures be unified to eliminate the established general or local practice of individual building authorities. Furthermore, the expectation shows that through digital technical maps, as mentioned below in more detail, digitalisation will significantly affect and fundamentally change the nature of the administration in other areas, such as property management, accident management, surveillance activities, environmental protection and much more. The principal benefits of the digitalisation of construction proceedings and spatial planning also include that project documentation will no longer have to be submitted in several copies at the offices of building authorities but

at: <https://onlinelibrary.wiley.com/doi/abs/10.1111/j.1365-2575.2005.00183.x>. Accessed 8 May 2024.

¹² For a comparative view see Shevchuk, O., Kompaniets, I., Volianska, O., Shovkoplias, O. and Baranchuk, V., „Electronic Administrative Judicial Procedure of Ukraine and the Right to Judicial Protection: Problems of Legal Regulation and Practical Issues”, *Juridical Tribune - Review of Comparative and International Law* 14, no. 1 (March 2024): 98-115.

will be submitted remotely in closed 2D (pdf) and 3D (IFC) formats. The possibility of retrospectively monitoring the course of the permit proceedings will undoubtedly contribute to the overall reduction in the length of the procedure and the quality of the decision.

Generally, for the indicated potential of digitalisation of construction proceedings and spatial planning, it is necessary to pay attention to ensuring the availability of high-speed internet, with a focus on the 5G technology. The above applies not only to households but also (if not primarily) to public administration bodies, not only in terms of workplace hardware and software equipment of workplaces but also to the digital capabilities of competent officials. With this, the digitalisation of public administration in general and building administration especially, which involves processing large data sets of project documentation and cartographic works, can be considered. It also follows from current practice that the mere possibility of communicating electronically with public authorities may mean something other than that the users will rely on this form of communication. Therefore, the state must begin a targeted effort to overcome the existing psychological barriers and established stereotypes in the behaviour of citizens, i.e. to focus more on informing people about the possibilities, methods, and benefits of electronic communication. The real e-government needs to remove the mentioned psychological barriers, and users should stop perceiving electronic tools only as an ‘additional’ service. It is also undoubtedly necessary to pay attention to the digital exclusion and promote digital literacy. There will always be groups of citizens who have more difficulty accessing the internet. The pressure exerted by some more recent legislation on the mandatory use of electronic tools, which does not reflect the real and actual needs and wishes, can often be counterproductive. Therefore, the public administration should offer alternative access options to services in the future¹³. The same applies to the appropriate timing of the new e-tool practical initiation.

The law-binding nature of legislation must also be considered when introducing information technologies in public administration. The management and use of information systems are closely related to the issues of processing and securing the protection of personal data and other transferred data.

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¹³ See some developments in Popa Tache, C. E., Săraru, C.-S. and Kouroupis, K., „Different perspectives concerning the right not to use the internet and some analogies with education” in *European Journal of Privacy Law & Technologies*, Issue 2024/1, Focus Section available open access here: <https://universitypress.unisob.na.it/ojs/index.php/ejplt/index>, accessed on 8.05.2024.

3. Legislative matters in question. A Czech example

This part of the paper highlights the most frequently discussed topic regarding the digitalisation of construction proceedings and spatial planning in the Czech Republic, emphasising this transition's numerous benefits.

Adopting the Digital Services Act¹⁴ is the first legislative step toward digitalising construction proceedings and spatial planning. In general, and most importantly, it serves in the Czech legal system as a unifying legal regulation governing the provision of digital services. For this paper, it is possible to draw particular attention to the wording of the provisions of Section 14, based on which the so-called digital services catalogue was created, containing actions aiming at digitalisation and taking place between citizens and public administration.

Within the framework of the construction agenda and public space planning, public administration must take numerous actions to ensure the digitalisation of the state administration of Land Surveying and Cadastre.¹⁵

The amendment to the Land Survey Act¹⁶ of 2020¹⁷ was also significant. It anchored, with effect from 1 July 2023, the regulation of digital technical maps – a large-scale cartographic work maintained on a computing device. A database file with a detailed transport and utility infrastructure drawing and selected natural, building, and technical objects and facilities expressing their actual condition entered into force. In particular, the capture of utility infrastructure, apart from the financial demands of creating a digital technical map, poses a relatively big challenge for digitalisation because the number of owners of utilities is significant. Their number is estimated to be between 10 and 20 thousand in the Czech Republic. Therefore, the authors assume that not all of them will have the required tools and technical possibilities. Officially authorised surveying engineers' verification could guarantee the accuracy of the data.¹⁸

Municipal and regional governments already use technical maps at various levels. Less than half of municipalities use them in some form. Also, digital map management will remain voluntary for municipalities in the future.¹⁹

The nature and purpose of digital technical maps indicate that they will

¹⁴ Act No. 12/2020 Coll.

¹⁵ Information about the State Administration of Land Surveying and Cadastre is available at www.cuzk.cz/en.

¹⁶ Act No. 200/1994 Coll.

¹⁷ Act No. 47/2020 Coll.

¹⁸ Section 12(b) of Act No. 200/1994 Coll. on Surveying: “*The results of surveying activities used to maintain the digital technical maps and in construction must verify an officially authorised person.*”

¹⁹ See Acquisition of an Important Agenda Information System of Public Administration within the Project Digital Technical Map of the Liberec Region, Development of E-government in the Liberec Region 2023. Tender documents: T466692632. MENA Report. Available online at: <https://zaky.liberec.cz>. Accessed 8 May 2024.

become an essential source of information and projects and provide environmental information and data on physical infrastructure and several other activities. With this in mind, ensuring that digital maps are accurate and up-to-date is fundamentally necessary. Rest assured, the administration and the users are committed to ensuring the maps are complete, final, and thoroughly reliable when launched.

In connection with the digital cartographic works, it appears appropriate to mention that digital technical maps supplement rather than replace the existing cadastral maps that contain information on property rights; orthophoto maps capture the appearance and condition of the territory and follow up on other possible ‘layers’ of cartographic works, like zoning plans, road data records or green area data records. Their existence is only a logical consequence of previous long-term development.

The interconnection of cartographic works holds significant potential for streamlining the self-assessment of specific projects from the individual authorities’ perspective. If effectively implemented, this interconnection could significantly reduce the overall length of the decision-making process, thereby enhancing efficiency and productivity.

The Building Code follows the Digital Services Act and the Land Survey Act,²⁰ which regulates public administration information systems in spatial planning and construction proceedings. The Building Code subsequently reflects these systems.

With effect from 1 July 2024, the Surveying Act provides for the establishment and launching of the following public administration information systems in matters of spatial planning and construction proceedings, which will enable remote access and the provision of digital services:

- a) The Builder’s Portal.
- b) National geoportal of spatial planning.
- c) Register of construction procedures.
- d) Register of electronic documentation.
- e) Building identification number information systems.
- f) Construction proceedings information systems.

The Builder’s Portal should enable digital actions about the building authority and the body concerned that provides the documents for issuing decisions, submitting applications to the owner of public transport or utility infrastructure and providing statements from the owner of public transport or utility infrastructure, entering data and documents in the national geoportal of spatial planning, register of construction procedures, register of electronic documentation, and digital map of public administration, making them available, and referring to them. The Builder’s Portal generates a gateway to digital services provided under the Building Act. The aim is to set up the Builder’s Portal so that the builder can

²⁰ Act No. 183/2006 Coll.

complete all tasks related to the permit for their project within its interface. That is why the system must allow the interconnection of builders, building authorities, administrative authorities, and affected utilities and infrastructure network owners. In order to make the user environment more manageable to understand, it will be linked to the register of construction proceedings. The register enables access to all documentation related to specific construction proceedings, decisions of building authorities, binding opinions of administrative authorities concerned and statements of owners of utility and infrastructure networks. The register of electronic documents serves as a documentation repository for plans and projects.

The right of access to data and electronic documents in the register of construction proceedings and the register of electronic documentation will be granted to those with the right to consult the file under the Code of Administrative Procedure.²¹ Parties to the proceedings and their legal representatives, persons who prove their legal interest or other serious reason, and persons who do not violate the rights of any of the parties or other persons concerned or the public interest can access the electronic documentation.²² Those obliged to comment on it and the designer will also be allowed access to the project documentation.

It should be possible not only to electronically submit, prepare, and complete the relevant submission with the possibility of referring to existing documents but also to monitor the current state of the proceedings and, if necessary, verify any relevant information. The interconnection of these information systems will significantly contribute to accelerating and clarifying the permit processes. The user can lodge from anywhere and at any time.

However, this advantage could be risky. Without working hours, such flexible working possibilities could be dangerous for work-life balance.²³ Unstable home connections to the Builder's Portal can lead to critical errors, potentially causing delays. Using personal devices without adequate cybersecurity measures, such as a firewall, can leave data vulnerable to attacks or misuse²⁴. Even simple actions like sharing passwords can compromise privacy and confidentiality.²⁵

Despite these risks, with proper technical and legal safeguards, the

²¹ Act No. 500/2004 Coll.

²² Section 38 of Act No. 500/2004 Coll. Code of Administrative Procedure.

²³ *Anytime, anyplace, anywhere: Mobile information technology devices and the blurring of borders between work and non-work domains*. "Human Resource Management International Digest" 2018. Vol. 26, No. 4, pp. 46–48. Available online at: <https://doi.org/10.1108/HRMID-04-2018-0067>. Accessed 8 May 2024.

²⁴ For some extended consequences see Konstantinos, K. and Sotiropoulos, L. „Cyber Challenges amid the Digital Revolution in Maritime Transport”, *Juridical Tribune - Review of Comparative and International Law* 14, no. 2 (June 2024): 321-340.

²⁵ Sovová, O., Sova, M. and Fiala, Z., „Privacy Protection and E-document Management in Public Administration”, *Juridical Tribune – Tribuna Juridica*, Volume 7, Issue 2, December 2017, pp. 17–26. Available online at: http://tribunajuridica.eu/arhiva/anul7v2_en.html. Accessed 8 May 2024.

Builder's Portal can be a convenient digital platform for all stakeholders to collaborate and share their views²⁶.

As already mentioned in the introductory part of this paper, whether the Builder's Portal will fulfil its indicated potential will also depend on the friendliness of its user environment and the digital readiness of its users. It is self-evident that significant amounts of sensitive data will flow through the Builder's Portal. The users' digital literacy is required, especially that of public officers.

The National Geoportal of Spatial Planning will publish selected parts of the spatial planning documentation and the definition of the built-up area or other spatial planning tools in uniform standards. Access to data published in the national geoportal of spatial planning may be restricted or denied in the interest of public security, ensuring national defence or protection of international relations, or protection of the rights of third parties.

The building identification numbers information system will record descriptive data on buildings and facilities and assign a unique identifier to each building or facility, enabling the identification of the building or facility in the information systems of the building administration. The building authority, without undue delay after the commencement of the proceedings, should issue the so-called birth number of the buildings. The number will serve primarily for the internal needs of the public administration. Further, the law should enshrine the parameters of the information system for construction proceedings. The records and files will be stored electronically.

4. Digitalisation and the Czech Building Code

The digitalisation of construction proceedings and spatial planning, a significant step forward, is intricately woven into the communication between decision-making entities. This integration is firmly established in Part 6, Sections 171–266, of the new Building Act, which is the legal backbone for these changes.

In connection with the digitalisation of construction proceedings, it is, first of all, possible to point out the method and form of submission, including the application. Submissions under the Building Act will also be possible via the Builder's Portal. Therefore, the possibility of submitting it in writing remains. The application, as a specific submission format, may only be generated using a specified form. The implementing regulation will enshrine formula details. However, due to the logic of the matter, electronic forms for other types of submissions will also have to be available in the Builder's Portal. In a situation where a document that is an essential part of the documentation, like the statement of the authority concerned or the owner of transport or utility infrastructure, will already

²⁶ See few comparative aspects in Vâlcu, E. N., „Crowdfunding Platforms, an Innovative Way of Providing Crowdfunding Services in the Age of Artificial Intelligence. EU Legislative Implications. Applicability in Romania”, *Athens Journal of Law* 2024, 10: 1-11 <https://doi.org/10.30958/ajl.X-Y-Z>.

be filed in the register of electronic documentation or the register of construction proceedings, the applicant will be able to refer to this document in their application instead of attaching it to the application. At the latest, with the application submission, the builder will have to enter the project or planning permit documentation into the electronic documentation register. In the case of applying itself, building administration information systems is only an option. However, the mentioned system must be applied when submitting the documentation.

The law requires building authorities to record all acts and insert all documents into the construction proceedings register, allowing the party to monitor the proceedings' course. Concerning the authorities concerned, the cited provisions establish an obligation to enter a statement, coordinated statement, or binding opinion in the register of construction proceedings, even when the applicant has contacted the authority concerned before the commencement of construction proceedings. In addition, the applicant must obtain the relevant statement, too. Such a course of action should facilitate the builder's procedure when applying, as they will not have to attach the statement of the authority concerned but only refer to it, as already mentioned above.

Under the new system, documents will flow exclusively through the construction procedures register, which will serve as a central hub for communication between the building and concerned authorities. This streamlined process aims to enhance efficiency and transparency in the proceedings.

Precise legal regulation is needed to deliver documents by the building authorities and the authorities concerned with the parties to the proceedings.

Public authorities will continue to deliver documents to the parties to the proceedings in the same way as before. In other words, the building administration information systems do not send documents to the parties involved in the proceedings. These systems only perform an information function. However, this only applies where the legal conditions for expressing the owners of public transport or utility infrastructure in terms of the possibility and method of connecting the project or the conditions of the protection and safety zones concerned are met.

The difficulty of these assignments in terms of the time frame set in the Czech Republic has repeatedly raised the issue of postponing the implementation of the new Building Act.²⁷ An utterly chaotic situation will arise if the building administration information systems are launched in time and the Building Code does not enter into force. The newly submitted applications will not be considered, and the proceedings to be completed at that time will be paralysed.

²⁷ Hegenbartova, M. *Amendments to New Czech Building Act Under Discussion*. 5 July 2022. Available online at: <https://ceelegalmatters.com/czech-republic/20438-amendments-to-new-czech-building-act-under-discussion>. Accessed 8 May 2024.

5. Discussion

The digitalisation of construction proceedings and spatial planning has considerable potential to move e-government in the desired direction. It offers several advantages for all stakeholders in the preparation and implementation of capital construction, especially in facilitating and accelerating their mutual communication, unifying methodological procedures, or monitoring the course of proceedings. The European Union (EU) is a leader in SDG research. However, applying the theory to functional outcomes and practice varies greatly in EU Member States and outside Europe.²⁸

Despite occupying a relatively small part of the planet, urbanisation and cities pose a significant climate risk. Such concerns underline the crucial role of the evidence base in urban centres for accurate predictions and practical actions to safeguard nature and the climate.²⁹

The main pitfall of the digitalisation process can be its time horizon. The experience in the Czech Republic suggests that it involves many gradual steps. Among the most important ones, the following can be mentioned – creating a legislative framework, including the issuing of the necessary implementing regulations, setting up and launching the building administration information systems, completing and continuously updating digital technical maps of regions and municipalities, creating appropriate technical facilities for public administration bodies, training authorised officials, and digitalising various types of submissions under the respective legislation.

In the digital age, social networks and media are opinion-makers. The state and public administration must address their users more humanly than the traditional bureaucratic tone. This humanised approach conveys a personality behind the authority and makes the procedure more understandable.³⁰ So, a broad information campaign must accompany the digitalisation of construction proceedings and spatial planning. Complete digitalisation in the construction industry can only be discussed when companies and citizens widely use electronic applications and communicate with public administrative bodies³¹. Therefore, this

²⁸ Nakamura, M., Pendlebury, D., Schnell, J., Szomszor, M. *Navigating Structure Research on Sustainable Development Goals*. Institute for Scientific Information. April 2019. p. 11. Available online at: https://clarivate.com/wp-content/uploads/dlm_uploads/2022/09/Navigating-the-Structure-of-Research-on-Sustainable-Development-Goals.pdf. Accessed 8 May 2024.

²⁹ Demuzere, M., Bechtel, B., Middel, A., Mills, G. „Mapping Europe into local climate zones”. *PLOS ONE* 14(4), April 2019. e0214474. Available online at: <https://doi.org/10.1371/journal.pone.0214474>. Accessed 8 May 2024.

³⁰ Mullan, A., Kidney, E. „Humanising of the brand voice on social media: The case of government agencies and semi-state bodies”. *Journal of Digital & Social Media Marketing*. “Henry Stewart” Publications. March 2020. Vol. 7(4). Pp. 344–354. Available online at: <https://hstalks.com/article/5559/humanising-of-the-brand-voice-on-social-media-the-/?business&noaccess=1>. Accessed 8 May 2024.

³¹ Popa Tache, C. E. and Săraru, C.-S., „Evaluating Today’s Multi-Dependencies in Digital Transformation, Corporate Governance and Public International Law Triad”, in *Cogent Social*

system must be sufficiently user-friendly and intuitive, but first, addressees and potential users must learn about its advantages and benefits in general.

Even if users still need to fully grasp and utilise digitalisation potential, its other elements, designed to enhance information exchange between building authorities, concerned bodies, owners of transport and utility infrastructure, and designers, will remain valuable. Their usefulness and necessity are undeniable.

6. Conclusion

In the future, it will become increasingly crucial to approach cartographic works with caution. The data they capture should be utilised in decision-making, serving as a local contribution to environmental protection. The significance of digitalisation in public administration and its vital role in environmental preservation are indisputable.

Working with information is one of the fundamental areas for both the public administration and its addressees. The theory and practice speak about a global information technology society, which takes many forms. Its specific types and characteristics also depend on historical and geographical conditions.³² That is why the approach and progress of digital public space differ in EU countries. Undoubtedly, the implementation depends on the country's economic conditions in general, public financing of digitalisation and the digital literacy of public officers and users. According to the Digital Economy and Society Index (DESI) 2022³³ Internet connection options and their acceleration in the EU are steadily growing. At least sufficient mobile connections are available in rural parts, too.

While the EU is making strides in digitalisation, the same Index cautions that urgent attention is needed on investments like semiconductors and chips. The EU states are trailing behind leaders such as the USA, South Korea, and Taiwan. Achieving digitalisation targets will necessitate significant public and private investments. The role of public administration in this matter is crucial, and new incentives for the private sector are vital for the technological autonomy of EU Member States.³⁴

Digitalisation, planning and construction of public spaces, their precise legal regulation and application by public authorities, and the inclusion of all community members form the way to sustainable life within Europe and all over the planet. Research in this field is essential, as it has the potential to shape the future of public administration in environmental protection worldwide.

'I have seen in many places housing which has been developed under

Sciences 10 (1) by Taylor & Francis. DOI:10.1080/23311886.2024.2370945.

³² Wilson M. I., Kelleman A., Corey K. E., *Global Information Society: Technology, Knowledge, and Mobility*. Lanham: Rowman & Littlefield Publishers, Inc., p. vii, 2013.

³³ Available online at <https://digital-strategy.ec.europa.eu/en/policies/desi>. Accessed 8 May 2024.

³⁴ Digital Economy and Society Index (2022). Digital infrastructure. 2 DESI 2022 thematic chapters, p. 22. Available at <https://digital-strategy.ec.europa.eu/en/policies/desi>. Accessed 8 May 2024.

*government influences, but I have never seen any projects in which governments have played their part which has fountains and statues and grass and trees, which are as important to the concept of the home as the roof itself.*³⁵

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