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The impact of COVID-19 pandemic on increasing the digital accessibility of local government units

SUMMARY The COVID-19 pandemic forced local government public services to move to the virtual world. Remote handling of matters in offices has become the rule rather than the exception. The 2016 EU Directive on public sector websites and mobile apps and the 2019 European Accessibility Act imposed an obligation to ensure that these services are provided electronically and accessible to people with disabilities. The aim of the authors' study was to find out whether the COVID-19 pandemic has resulted in the implementation of European solutions in the Polish legal order and whether this implementation has resulted in the actual adaptation of the digital activities of local government units (LGUs) to the needs of people with disabilities. The research was conducted in Q4 2022 with two samples: 1. in the form of a questionnaire (approx. 250 LGUs) covered the fulfilment of formal requirements, the preparation of officials for the creation of digitally accessible documents and content, and the organisational preparedness of offices. 2. in the form of an analysis of the source code of the websites of 66 Polish cities with poviat rights – in view of the available results of the same sample from 2015.

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The conducted research indicated that local government units in Poland: 1. met the formal and organisational requirements of digital accessibility, 2. did not make the necessary efforts to prepare employees to produce digitally accessible documents and content, and 3. the websites examined had lower quality source code in terms of meeting the WCAG standard in 2022 than in 2015. It seems reasonable to conclude that the COVID-19 pandemic has had a formal rather than a real impact on the digital accessibility of services provided by Polish LGUs.

KEYWORDS information society, digital accessibility of administration, electronic public services

Introduction

The turn of the 20th and 21st centuries witnessed a dynamic development of information and communication technologies (ICTs). The widespread and increasingly affordable access to the internet and computers as well as the development of mobile technologies made information a key resource for economics and the economic development, science, work, and culture. The information society that has emerged under such circumstances has functions that distinguish it from earlier types of societies and enable it to manage information and use technology effectively. For a society to be considered an information society, it should perform the following functions:

1. Communication function: The information society enables easy, fast and widespread communication between individuals, institutions, and businesses. Access to communication networks, such as the internet or social media, is crucial for large-scale information exchange.
2. Educational function and competence building: One of its basic functions is the continuous training and development of citizens' digital competences. The information society promotes lifelong learning, access to online educational resources, and the acquisition of skills necessary in the digital world.
3. Changing the economy's profile: The information society supports the development of an economy based on knowledge and information. Key elements are the development of sectors such as IT, digital services, e-commerce, and technological innovation, which become the driving force of economic growth.
4. Social integration: In the information society, technology facilitates social integration by enabling people from different backgrounds to access the same information and services. Social media, online forums and

communication platforms enable building social ties, and sharing experiences.

5. Empowering political participation and democratising social life: The information society promotes transparency in government activities, facilitates access to public information, and involves citizens in decision-making processes. Digital tools such as e-government, online petitions or e-voting strengthen democracy and civic participation.
6. Information management: A crucial function of the information society is the effective management and processing of large amounts of data. This includes collecting, storing, analysing and sharing information in a way that supports insightful decision-making and innovation.
7. Fostering innovation: The information society constantly strives for innovation and the exploration of new technological solutions. This enables the development of new products and services, and the improvement of existing processes, which is crucial for social and economic progress.
8. Access to information and digitisation of public services: The information society provides universal internet access to public services, such as healthcare, education, administration, and security. By doing so, it assists citizens with their daily life of and improves the quality of public institutions.
9. Data protection and privacy: The protection of personal data and privacy has become an essential element of the information society. Securing information and educating citizens about their rights in the digital world are key aspects of this type of society.

In comparison to the previous periods all these characteristics make the information society more, oriented towards knowledge, innovation and the efficient use of information resources. However, relying on the development of ICT and access to information in driving growth means that an important part of the population rests completely or partially deprived of the opportunity to participate in the information society, and digital exclusion has an increasing share in overall social exclusion.

The COVID-19 pandemic has further brought to light the problem of digital accessibility, especially in the context of public administration. Enforced social isolation has led to an increased demand for digital public services, allowing government customers to remotely deal with their important matters. This has created new challenges and needs regarding the accessibility of information and online services for all citizens, including people with disabilities. In addition,

the pandemic has drawn attention to the importance of digital communication and remote education, which has required the adaptation of platforms to meet the needs of users.

Under current Polish regulations, public entities are required to make content and services available online in compliance with digital accessibility requirements. An indicator of such accessibility is the compliance of content and services made available by them with the WCAG 2.1 standard. It only seems reasonable to examine whether the content and services made available by LGUs meet the digital accessibility standards in general, and if not, why.

For the purposes of the research, a definition of digital accessibility in line with European Standard EN301549 was adopted: Digital accessibility is the extent to which digital products, systems, services, environments, and objects can be used by the widest possible proportion of the population, across the widest possible range of characteristics and capabilities, to achieve the purpose for which the specified products, systems, services, environments, and objects have been produced and made available (EN Standard 301 549 V3.2.1, 2021).

The research was carried out in two areas: the digital accessibility of the main information websites of the cities with county rights (physical survey) and the extent and manner of implementation of the duty to ensure digital accessibility of municipalities (survey).

The issue of accessibility in European Union documents

The issue of accessibility, including digital accessibility, is regulated in the European Union by two key Directives of the European Parliament and of the Council (EU). Directive 2016/2102 of 26 October 2016 on the accessibility of websites and mobile applications of public sector bodies (Directive 2016/2102, 2016, pp. 1–15). The main objective of this Directive was to increase the accessibility of websites and mobile applications of public sector bodies in EU countries. The provision stipulates that achieving the objective requires actions including:

Ensuring accessibility: enabling all users, including people with disabilities, to have full access to information and online services provided by public sector bodies.

- Harmonise regulations across EU countries: establish common rules on accessibility across the European Union, making it easier to use online resources in different Member States.

- Promoting equality: promoting equal access to information and communication technology for all citizens, including those with access limitations.
- Removing barriers to access: identifying and eliminating obstacles that may prevent or impede the free use of electronic public services.
- Increasing transparency: improving the quality and transparency of public bodies' accessibility activities to increase citizens' trust in these institutions.
- Facilitating innovation: encouraging more innovative and inclusive technological solutions that can make services more accessible.

The Directive on the accessibility of public sector bodies' websites and mobile applications aims to create a more sustainable and inclusive information society in which all citizens have equal access to public services.

However, the most important piece of EU legislation dedicated to accessibility, while treating the issue most cross-cuttingly, is Directive 2018/822 of the European Parliament and of the Council (EU) of 17 April 2019 on accessibility requirements for products and services (EAA) (Directive 2018/822, 2019). The Directive aims to reduce the barriers that limit the access of people with disabilities and older citizens to products and services. In particular, the EAA seeks to address:

1. Physical barriers: many public facilities and services, such as ATMs, ticket vending machines, and payment terminals, are difficult to use for people with physical disabilities. The EAA mandates that these devices should be designed for easy access.
2. Digital barriers: websites, mobile applications, and online services often lack accessibility features, making them useless for people with visual, hearing, or cognitive impairments. The EAA mandates companies to improve the accessibility of digital services such as e-commerce websites, banking apps, and public transport booking systems.
3. Communication barriers: access to telecommunications services and audiovisual media can be difficult for people with hearing or visual impairments. The EAA requires service providers to ensure that telecommunications equipment, audiovisual media and emergency services (such as the European emergency number 112) are accessible.
4. Information barriers: instructions and user interfaces for products and services often do not have accessible formats (e.g. large print, Braille, or audio descriptions). The law mandates clear, accessible information for all users.

5. Barriers to services: many public services, including transport, healthcare, and banking, do not have accessible support systems, such as help desks and call centres, to serve people with disabilities. The EAA sets guidelines for these services to improve accessibility. In terms of digital accessibility, the Directive applies:

- to the following products placed on the market after 28 June 2025:
  a) general-purpose computer hardware systems and operating systems for them;
  b) the following self-service terminals:
     i. payment terminals;
     ii. the following self-service terminals for the provision of services within the scope of this Directive:
        – ATMs,
        – ticket vending machines,
        – self-service check-in facilities,
        – interactive self-service terminals providing information, except for terminals installed as integrated parts of vehicles, aircraft, watercraft, or rolling stock;
  c) consumer terminal equipment with interactive computing capabilities used for electronic communications services;
  d) consumer terminal equipment with interactive computing capabilities audiovisual media services; and
  e) e-book readers.
- [...] this Directive shall apply to the following services provided to consumers after 28 June 2025:
  a) electronic communications services, except for transmission services used for the provision of machine-to-machine communications;
  b) services providing access to audiovisual media services;
  c) the following elements of air, bus, rail, and water passenger transport services, except for urban and suburban services and regional services, to which only elements covered by point (v) shall apply:
     i. websites;
     ii. mobile-based services, including mobile applications;
     iii. electronic ticketing and electronic ticketing services;
     iv. provision of information on transport services, including real-time travel information; with respect to information screens, this shall be limited to interactive screens located in the Union;

v. interactive self-service terminals located on the territory of the Union, except for those installed as integrated parts of vehicles, aircraft, watercraft and rolling stock, used for the provision of any part of such passenger transport services;

d) retail banking services;

e) electronic books and their specialised software; and

f) e-commerce services.

- This Directive shall apply to the receipt of emergency calls that are directed to the single European emergency number 112 (Directive 2019/882, 2019, pp. 13–15).

By reducing these barriers, the EAA aims to increase the independence and participation in society of people with disabilities and the elderly. However, it should be remembered that European Union Directives are legislative acts that require Member States to meet specific goals and objectives, but leave them free to choose the form and means to be used for their implementation. Therefore, it is necessary to implement them into the legal order of individual Member States. The process of introducing directives into the national legal order involves several key steps:

EU adoption of the directive: The directive is passed by the EU institutions, which is the first step for its implementation.

Transposition of the Directive: Member States are required to transpose the Directive into their national law within a specified period, usually between 1 and 3 years after its adoption. This means that they have to adapt their legislation (e.g. laws, regulations) to meet the objectives set out in the directive.

Alignment of regulations: National authorities develop appropriate legislation, which may include new regulations or amendments to existing legislation. In the case of Directive 2016/2102, this may include regulations on the accessibility of websites and mobile applications.

Monitoring and reporting: once a directive has been implemented, Member States are required to report to the European Commission on the progress of implementation and any challenges. The Commission monitors the implementation of directives in Member States.

Enforcement: if a Member State fails to implement a directive on time or does not comply with its requirements, the European Commission may initiate infringement proceedings, which may lead to a case before the Court of Justice of the European Union.

Implementation of the Directive therefore requires cooperation between EU and national institutions, as well as involvement in the legislative process in each Member State

Digital accessibility in Polish law

The issue of digital accessibility, although not yet explicitly named, was introduced into the Polish legal order by the Act of 17 February 2005 on the informatisation of the activities of entities performing public tasks (Act on Informatisation, 2005). The implementing provision of the Act was the Ordinance of the Council of Ministers of 12 April 2012 on the National Interoperability Framework, minimum requirements for public registers and information exchange in electronic form and minimum requirements for ICT systems (KRI Ordinance, 2012), which imposed on public entities the use of the WCAG 2.0 standard for all websites and applications they produce and make available.

The provision that directly introduced the concept of digital accessibility into the Polish legal order is the Act of 4 April 2019 on digital accessibility of websites and mobile applications of public entities (Act on Accessibility of Websites and Applications, 2019), which implements Directive 2016/2102 of 2016 (Directive 2016/2102, 2016).

The provisions of Act 04/04/2019 imposed the following obligations on Polish public entities:

1. Ensuring reliability: authorities have been obliged to ensure that their websites and mobile applications are accessible to people with disabilities. Websites and mobile applications must be designed, made accessible, and operated in accordance with the requirements set forth in the Act.
2. Monitoring and reporting: offices must monitor the accessibility of their websites and mobile applications (accessibility declaration) and report on actions to ensure standards are maintained. These reports must be updated regularly and made available to the public.
3. Training and services: offices are required to provide their employees with the necessary training in the development and provision of digitally accessible websites and mobile applications. Employees should also be re-trained in the principles and techniques of creating their content.
4. Provision of accessibility information: authorities are required to provide information on the digital accessibility of their websites and applications,

such as an accessibility declaration and contact information for users who need assistance with the digital accessibility of the content provided.

5. Mutual recognition: if an office uses content provided by others, it is obliged to check that this content is accessible. If the content is not digitally accessible, the office should bring it up to accessibility standards or withdraw it from publication.
6. Accessibility of content commissioned from parties: if an office commissions an external company to create a website or mobile app, it should include accessibility rules in the contract/agreement and monitor that the content complies with standards.

Another law introducing digital accessibility issues is the Act of 19 July 2019 on Ensuring Accessibility for Persons with Special Needs (Accessibility Act, 2019). The purpose of this Act is to ensure equal access to various spheres of society regardless of health condition or disability, including information, services, buildings, and public spaces. The Act thus extends the scope of digital accessibility to include architectural and communication accessibility. In the area of ICT use, this implies:

1. the installation of equipment or other technical means to serve the hearing-impaired, in particular induction loops, FM systems, or equipment based on other technologies designed to assist hearing,
2. providing on the website of the entity concerned information about the scope of its activities – in the form of an electronic file containing machine-readable text, recordings of content in Polish sign language, and information in easy-to-read text,
3. providing, at the request of a person with special needs, communication with a public entity in the form specified in that request.

In addition, the Act mandates public entities to appoint an accessibility officer and sets out the manner and scope of accessibility control in public entities, how it is certified, and the penalties for evading to provide accessibility.

The Act on Ensuring Accessibility for People with Special Needs implements Directive (EU) 2019/882 of the European Parliament and of the Council of 17 April 2019 on accessibility requirements for products and services.

Analysing the timing and scope of the digital accessibility legislation implemented in Poland, it was to be expected that the public administration would be prepared to provide digitally accessible electronic services during the outbreak of the COVID-19 pandemic.

Survey on the accessibility of LGUs' websites

Assumptions of the study

The information websites of all 66 Polish cities with the status of "cities with poviat rights" were selected as the subject of the study. This assumption results from formal and practical reasons.

Formally, cities with poviat rights are:

- the largest cities in Poland,
- due to the distribution of population, they are the centres with the highest accumulation of people at risk of digital exclusion (requiring digital accessibility),
- due to the employment numbers in municipal offices and the size of their budgets, they have the greatest human and financial potential to implement changes in the area of ICT,
- are the main centres serving tourism and foreign investment, and therefore their websites should be a model not only aesthetically and functionally, but also technologically.

A practical aspect of the research sample selected in this way is the possibility to compare the results obtained with the results of the study of compliance with the WCAG standard conducted in 2015 after the entry into force of the Regulation of the Council of Ministers of 12 April 2012 on the National Interoperability Framework, minimum requirements for public registers and information exchange in electronic form and minimum requirements for ICT systems.

Scope of the survey of local authority websites.

Web accessibility was checked at two levels:

- Technical accessibility – ensures that people using screen readers (e.g. blind or deaf-blind) can navigate the site and read the content provided efficiently. This level of accessibility lies within the scope of compliance with the WCAG standard.
- Visual accessibility – the ability to use text magnification, change contrasts, invert colours, highlight active links in the text, and other enhancements to the 'visual' use of web pages.

The compliance of the pages with the WCAG standard was checked using an automatic validator available at:

http://achecker.ca/checker/index.php#output_div; https://achecker.achecks.ca/checker/index.php

Both studies (2015 and 2023) checked for compliance with WCAG 2.0 by assuming that the WCAG 2.1 version of the standard includes the WCAG 2.0 standard, i.e. pages that do not comply with WCAG 2.0 certainly do not comply with version 2.1.

Table 1. List of websites included in the study

City	Website address
Biała Podlaska	https://bialapodlaska.pl
Białystok	https://www.bialystok.pl
Bielsko-Biała	https://bielsko-biala.pl
Bydgoszcz	https://www.bydgoszcz.pl
Bytom	https://www.bytom.pl
Chełm	https://samorzad.gov.pl/web/miasto-chelm
Chorzów	https://www.chorzow.eu
Częstochowa	https://www.czestochowa.pl
Dąbrowa Górnicza	https://www.dabrowa-gornicza.pl
Elbląg	https://www.elblag.pl
Gdańsk	https://www.gdansk.pl
Gdynia	https://www.gdynia.pl
Gliwice	https://gliwice.eu
Gorzów Wielkopolski	https://um.gorzow.pl
Grudziądz	https://grudziadz.pl
Jastrzębie-Zdrój	https://www.jastrzebie.pl
Jaworzno	https://www.jaworzno.pl
Jelenia Góra	https://www.jeleniagora.pl
Kalisz	https://www.kalisz.pl
Katowice	https://katowice.eu
Kielce	https://www.kielce.eu
Konin	https://www.konin.pl
Koszalin	https://www.koszalin.pl
Kraków	https://www.krakow.pl
Krosno	https://www.krosno.pl
Legnica	https://portal.legnica.eu
Leszno	https://leszno.pl

City	Website address
Lublin	https://lublin.eu
Łomża	http://www.lomza.pl
Łódź	https://uml.lodz.pl/index.php
Mysłowice	https://www.myslowice.pl
Nowy Sącz	https://nowysacz.pl
Olsztyn	https://olsztyn.eu/o-olsztynie.html
Opole	https://www.opole.pl/dla-mieszkanca
Ostrołęka	https://www.ostroleka.pl
Piekary Śląskie	https://piekary.pl
Piotrków Trybunalski	https://www.piotrkow.pl
Płock	https://nowy.plock.eu
Poznań	https://www.poznan.pl
Przemyśl	https://przemysl.pl
Radom	http://www.radom.pl/page
Ruda Śląska	https://www.rudaslaska.pl
Rybnik	https://www.rybnik.eu
Rzeszów	https://www.erzeszow.pl
Siedlce	https://siedlce.pl
Siemianowice Śląskie	https://siemianowice.pl
Skierniewice	https://www.skierniewice.eu
Słupsk	https://www.slupsk.pl
Sopot	https://www.sopot.pl
Sosnowiec	https://www.sosnowiec.pl
Suwałki	https://um.suwalki.pl
Szczecin	https://www.szczecin.eu/pl
Świętochłowice	https://swietochlowice.pl
Świnoujście	https://www.swinoujscie.pl
Tarnobrzeg	https://um.tarnobrzeg.pl
Tarnów	https://www.tarnow.pl
Toruń	https://www.torun.pl
Tychy	https://umtychy.pl
Wałbrzych	https://um.walbrzych.pl
Warsaw	https://um.warszawa.pl
Włocławek	https://www.wloclawek.eu
Wrocław	https://www.wroclaw.pl
Zabrze	https://miastozabrze.pl
Zamość	http://www.zamosc.pl

City	Website address
Zielona Góra	https://www.zielona-gora.pl
Żory	https://www.zory.pl

Source: own elaboration.

The following parameters were checked in the visual accessibility study for each site:

- Publication of accessibility statements,
- Responsiveness of the website,
- Ability to resize text,
- Ability to change contrast,
- Availability of a visual facilitation package (including at least: font size, contrast, highlighting of active links, highlighting of titles)

Survey of municipalities

The survey was conducted in December 2022 and March 2023 in the form of a standardised questionnaire sent to the official email addresses of the local authorities.

In the December 2022 survey, 97 LGUs responded and in the March 2023 survey another 156 LGUs responded. As the responses of 3 LGUs were included in both surveys, those of March 2023 were included in the sample. A total of 250 LGUs responded to the accessibility questions, i.e. 8.7% of the 2 873 LGUs in Poland.

Regarding digital accessibility, the questionnaires included the following questions:

1. Has your office made the accessibility statement available on its website?
2. Has your office appointed an accessibility officer?
3. Are accessibility issues included in the organisational documents of your office?
4. Have all employees of your office received training on ensuring digital accessibility?
5. Which organisational forms of digital accessibility training have your employees used (please indicate the most popular)?

Findings

Analysis of selected websites of local authorities

A summary of the results obtained from the validation of the selected websites for compliance with the WCAG 2.0 standard is presented in the table below:

Table 2. Validation of the WCAG 2.0 standard for selected websites

Number of errors in the code of a given website	2015	2023
No errors	7 websites	12 websites
Less than 5 errors	7 websites	9 websites
From 5 to 50 errors	34 websites	31 websites
More than 50 errors	18 websites	14 websites

Source: own research and Nowak (2015).

If we assume that the target state is that there are no errors in the page code and the acceptable state is less than 5 errors, we can conclude that the degree of compliance with the WCAG 2.0 standard has increased over 8 years from 21.21% to 31.81%. Despite the significant percentage increase (about 50%) in absolute terms, it must be considered that the surveyed sites have not reached a satisfactory level of compliance with the WCAG standard.

The websites of Polish cities with poviat rights were also subjected to a direct analysis in terms of visual accessibility. A comparison of results from 2015 and 2023 is presented in the table below:

Table 3. Analysis of visual accessibility of selected websites

Trait under study	2015	2023
Accessibility Statement Shared	0 websites	54 websites
Responsiveness of the websites	22 websites	66 websites
Change text size	26 websites	41 websites
Changing contrast settings	9 websites	43 websites
The website has a package of facilities	26 websites	13 websites
The website does not have any facilities (items 2–5)	25 websites	10 websites

Source: own research and Nowak (2015).

The physical web survey shows that 81.81% of sites have included a mandatory accessibility statement (in 2015 this was not required). The biggest improvement concerns the responsiveness of the surveyed websites. This is mainly due

to the development of the content management systems (CMS) used by the LGUs. Today, responsive websites have become a common standard.

The number of sites that do not offer any facilities for people with visual impairments has decreased (from 37.9% in 2015 to 15.2% in 2023). Unfortunately, the number of sites that offer a full facilitation package (including at least: font size, contrast, highlighting active links, and highlighting titles) has also decreased (from 39.4% in 2015 to 19.7% in 2023).

In the other parameters tested, there is de facto no significant change if we add up the number of pages allowing only the contrast change and the facilitation package and the number of pages allowing the font size change and the facilitation package.

Surveys of member states

The individual survey questions yielded the following results:

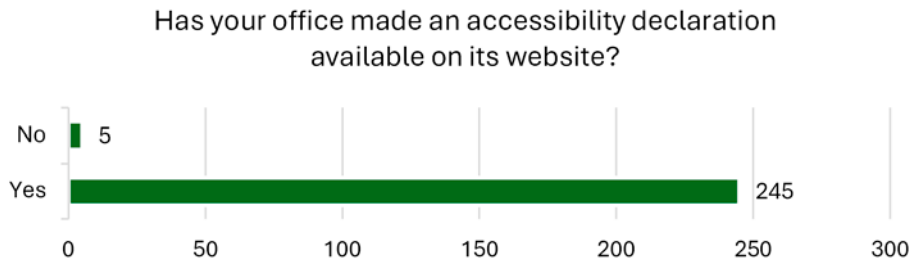

Figure 1. Providing an accessibility declaration

Source: own research.

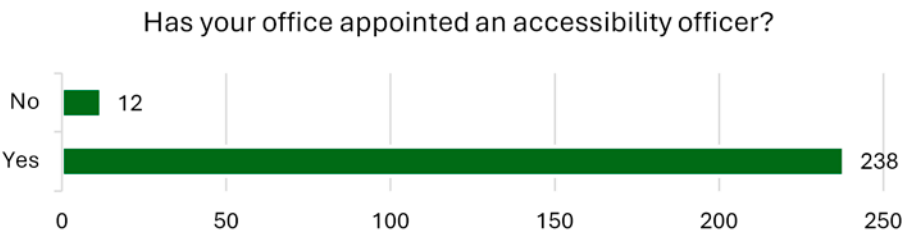

Figure 2. Appointment of the Accessibility Officer

Source: own research.

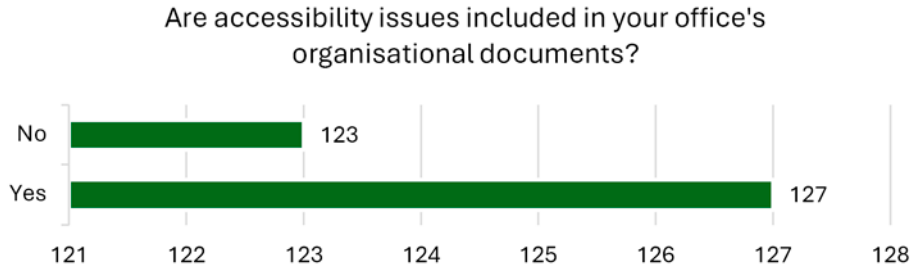

Figure 3. Considering the problem of accessibility in the organization of the office

Source: own research.

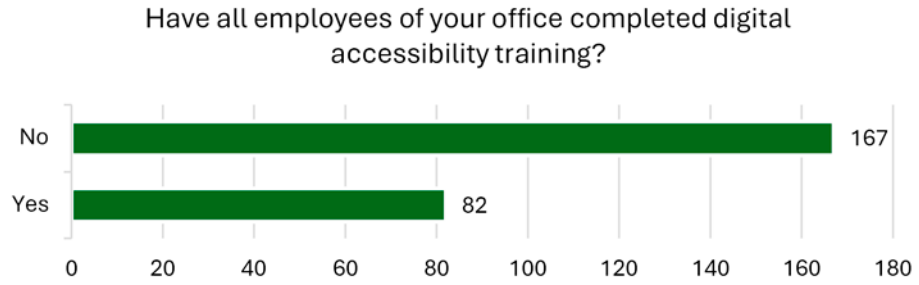

Figure 4. Employee training in accessibility

Source: own research.

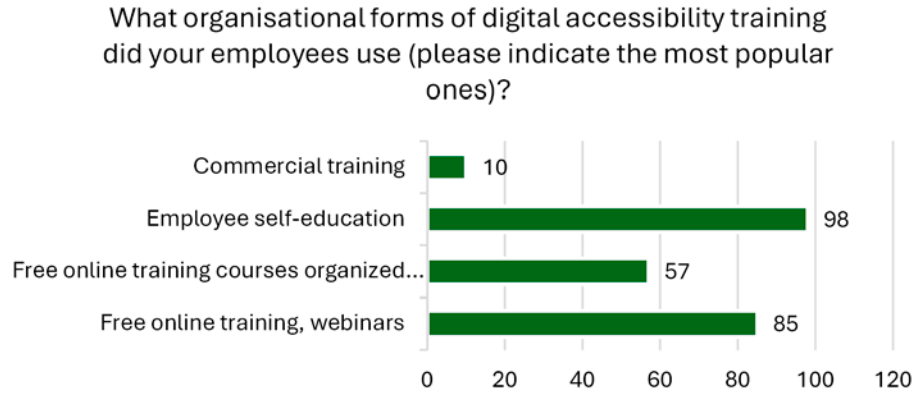

Figure 5. Accessibility training methods used

Source: own research.

The survey of local government units indicated that they have implemented formal digital accessibility requirements: they have published accessibility declarations for their websites and applications and appointed accessibility officers.

The difference between the number of websites with accessibility declarations (for the physically surveyed websites) and the level declared in the survey is due to the difference in the target group of the survey. As per the structure of local government in Poland, most of the local governments are communes (rural gminas and rural-urban gminas), which are characterised by greater formalism in their activities – timely fulfilment of obligations resulting directly from legal regulations. The results of the survey on the publication of accessibility declarations should therefore be considered more representative for Polish self-governments.

Much worse is the engagement in real action to develop the level of digital accessibility in the activities of local authorities. Effective administrative actions are based on effective internal procedures and the competence of officials. Only 51% of the surveyed offices have introduced issues related to ensuring digital accessibility into internal executive procedures, which have a decisive impact on how the employees of the local government carry out their duties. Another important indicator over and above the declarative provision of digital accessibility is the level of training of the workforce in offices. Of the offices surveyed, only 33% declared that all their employees had been trained in digital accessibility. If we consider that only 4% declared the use of commercial training in this area, and almost 40% relied on self-learning of employees, the level and scope of knowledge acquired by employees of local authorities raise serious scepticism.

Conclusions

Ensuring digital accessibility of government is one of the key challenges of building an information society. The issue of accessibility, including digital accessibility, is one of the basic elements of a democratic state under the rule of law in the 21st century. It is incumbent on public authorities and public institutions to adopt adequate legal regulations to guarantee access to e-government for all users (Skoczylas, 2022). Contrary to the common perception of the problem of digital accessibility as concerning only the elderly and the disabled (especially those with vision problems), ensuring the accessibility of digital government may periodically be needed by all of us. Changing social structures and a rapidly ageing population mean that the group of people with limited temporary or permanent abilities to use ICT-based solutions is steadily growing. "Digital accessibility is intended to ensure that no one is excluded, and that content is adapted to different audiences" (Kolbus, www.publicystyka.ngo.pl).

As the internet grows in popularity, it is becoming egalitarian. The use of internet resources is to become universal, regardless of the users' technical skills, hardware, software, and the place and manner of access. In order for such universality to work, internet resources must be created according to universally recognised, uniform rules. One of them "is digital accessibility, i.e. creating digital solutions so comprehensible and simple that most people can use them without additional customisation. At the same time, digital accessibility supports those users who benefit from special, additional solutions" (NPRM, 2022).

The legislation in force in Poland from 2019 and the implementing regulations cited in Part 3 of the article have provided the necessary legal environment for a qualitative change in the digital accessibility of e-public services made available by local government administration. Thus, it seems legitimate to state that the implementation of the formal and legal requirements would result in Polish public entities entering the COVID-19 pandemic period prepared to provide digitally accessible services.

A comparative (physical) study of websites did not show a qualitative change in the area of digital accessibility, and in some areas, quality deteriorated. One example is the reduction in the number of sites providing a text enlargement function at the functional level of the website. Although all the most popular web browsers have such a function, efficient use of this functionality requires the use of so-called keyboard shortcuts ("ctrl+", "ctrl-"), and this is a serious limitation for, for example, people who cannot use both hands and all fingers efficiently when using a computer keyboard.

The vast majority of the territorial self-governments (over 90% of respondents) meet formal requirements, the fulfilment of which is easily controlled and sanctioned by law. However, based on the conducted research, it is impossible to demonstrate that digital accessibility issues have been truly integrated into the standard of operation of the local authorities.

A qualitative leap in the accessibility of digital government is only possible through the integration of accessibility measures into the operational standards of public offices and the widespread and effective training of civil servants, and the ability to create digitally accessible documents and content must be made into the standard of minimum digital competences required of public administration employees.

The issue of digital accessibility is becoming more and more important for increasingly larger social groups in Poland and the EU. On the one hand, this is closely linked to the growing role of the internet as the primary medium

of the information society, and on the other hand, to the challenges posed by the ageing population and the accompanying issue of a growing number of people who are not fully able-bodied. Today, people with disabilities "include not only people who are blind or deaf, but also people who are visually impaired, people with a temporary disability resulting, for example, from a broken limb, or people acting under very severe stress and therefore unable to find basic information on hospital websites" (Polanski, 2020). Despite the transfer due to the COVID-19 pandemic of a significant part of the activity of the LGUs to the digital world, there has been no noticeable change in the level of digital accessibility of the public e-services they provide. Unfortunately, as the published research results show (Nowak, Czekaj & Salachna, 2023; 2024), it is the local government units that are the part of the public sector that has best implemented digital accessibility to their websites, applications and operating policies.

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Acts

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Directive (EU) 2016/2102 of the European Parliament and of the Council of 26 October 2016 on the accessibility of public sector bodies' websites and mobile applications (OJ L 327, 2.12.2016).

EN 301 549 V3.2.1, Accessibility requirements for ICT products and services, 2021, https://www.etsi.org/deliver/etsi_en/301500_301599/301549/03.02.01_60/en_301549v030201p.pdf (accessed: 28.05.2024).

Regulation of the Council of Ministers of 12 April 2012 on the National Interoperability Framework, minimum requirements for public registers and the exchange of information in electronic form and minimum requirements for ICT systems (Journal of Laws 2012, item 526).
Act of 17 February 2005 on Informatisation of the Activities of Entities Performing Public Tasks (Journal of Laws 2005 No. 64, item 565).
Act of 19 July 2019 on ensuring accessibility for people with special needs (Journal of Laws 2019, item 1696).
Act of 4 April 2019 on digital accessibility of websites and mobile applications of public entities (Journal of Laws 2019, item 848).

Wpływ pandemii COVID-19 na zwiększenie dostępności cyfrowej jednostek samorządu terytorialnego

STRESZCZENIE Pandemia COVID-19 wymusiła przeniesienie usług publicznych administracji samorządowej do świata wirtualnego. Zdalne załatwianie spraw w urzędach stało się regułą, a nie wyjątkiem. Dyrektywa Unii Europejskiej z 2016 r. dotycząca stron internetowych i aplikacji mobilnych sektora publicznego oraz *Europejski akt o dostępności* z 2019 r. nałożyły obowiązek, aby usługi te były świadczone elektronicznie oraz były dostępne dla osób z niepełnosprawnościami. Celem badania przeprowadzonego przez autorów było sprawdzenie, czy pandemia COVID-19 spowodowała implementację rozwiązań europejskich w polskim porządku prawnym oraz czy ta implementacja spowodowała rzeczywiste dostosowanie cyfrowych działań jednostek samorządu terytorialnego (JST) do potrzeb osób z niepełnosprawnościami.

Badania przeprowadzono w IV kwartale 2022 r. na dwóch próbach:

1. w formie ankietowej (ok. 250 JST) obejmowały spełnienie wymogów formalnych, przygotowanie urzędników do tworzenia dokumentów i treści dostępnych cyfrowo oraz przygotowanie organizacyjne urzędów.
2. w formie analizy kodu źródłowego stron internetowych 66 polskich miast na prawach powiatu – ze względu na posiadane wyniki takiej samej próby z 2015 r.

Zrealizowane badania wykazały, że JST w Polsce:

1. spełniły formalne i organizacyjne wymogi dostępności cyfrowej,
2. nie dołożyły niezbędnych starań w zakresie przygotowania pracowników do tworzenia dokumentów i treści dostępnych cyfrowo,
3. badane strony internetowe miały w 2022 r. gorszej jakości kod źródłowy w zakresie spełniania standardu WCAG niż w 2015 r.

Zasadny wydaje się wniosek, że pandemia COVID-19 miała formalny, a nie rzeczywisty wpływ na dostępność cyfrową usług świadczonych przez polskie JST.

SŁOWA KLUCZOWE społeczeństwo informacyjne, dostępność cyfrowa administracji, elektroniczne usługi publicznej

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