



Digitalisation and digital transformation in Bulgaria

Implications for persons with disabilities

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Table of contents

1	Executive summary.....	6
2	Are government strategies and plans on digitalisation and digital transformation disability-inclusive?	8
	2.1 Disability inclusion in generic strategies on digitalisation and digital transformation.....	8
	2.2 Disability inclusion in focused or sector-specific strategies on digitalisation and digital transformation	9
3	Do disability strategies address the potential of and challenges pertaining to digitalisation and digital transformation?	15
	3.1 How digitalisation and digital transformation are addressed in the national disability strategy	15
	3.2 How digitalisation and digital transformation are addressed in specific disability-related strategies	17
4	Promoting disability inclusion through funding, education and training	18
	4.1 How funding promotes disability-inclusive digitalisation and digital transformation.....	18
	4.2 How disability inclusion is promoted through the education and training of digital professionals	18
	4.3 How digital inclusion and accessibility is addressed in the education and training of accessibility and inclusion professionals.....	20
	4.4 How digital inclusion is addressed via the training of people with disabilities	21
5	The opportunities and challenges presented by digitalisation and digital transformation to the rights of persons with disabilities	22
	5.1 The most significant opportunities presented by digitalisation and digital transformation for persons with disabilities	22
	5.2 The most significant challenges faced by persons with disabilities in relation to digitalisation and digital transformation	23
6	Conclusions and recommendations	24
	6.1 Conclusions	24
	6.2 Recommendations.....	24

1 Executive summary

During the period 2019-2021, several overarching strategies and national programmes concerning digitalisation and digital transformation have been adopted in Bulgaria. None of them explicitly addresses the impact of digitalisation on persons with disabilities. The strategies only mention EU funding as the main source, without including concrete figures, indicators for implementation or financial planning. The main instruments are legislative amendments, research and investments. The National Programme *Digital Bulgaria 2025* (adopted in December 2019) is focused on modernisation and the universal introduction of intelligent IT solutions in all spheres of the economy and social life.

The National Programme *Digital transformation of Bulgaria during the period 2020-2030* (adopted in 2020) contains an overall description and analysis of the need, and planned activities, for digital transformation in 16 sectors. These are digital infrastructure, cybersecurity, scientific research and innovation, education and training, an adapted labour market, social protection, digital economics, transport, agriculture, culture, environment and climate, energy, healthcare, digital management, regional development and finance.

The *Strategy for the Development of E-Governance of the Republic of Bulgaria 2019-2023* (updated in 2019) mentions the principle of inclusion and accessibility in e-governance. This means that public authorities and administrations should design e-public services that are inclusive by default and meet different needs, such as the needs of older people and people with disabilities.

The generic or sector-specific Government-led strategies on digitalisation and digital transformation are not disability-inclusive. People with disabilities are mentioned extremely rarely and vaguely in these documents, with no specific figures, measures or funding indicators included.

The *National Disability Strategy* (adopted in December 2020) addresses the potential and some of the challenges of digitalisation and digital transformation very briefly. Regarding accessibility and universal design, it specifies the provision of high-quality and high-tech technical aids, including specialised software programmes and adapted technical and medical devices related to communication and mobility. Regarding healthcare, it envisages the improvement of mechanisms for providing medical devices and technical aids for the habilitation and rehabilitation of people with disabilities. With regard to employment, specialised training for digital skills needed in the labour market is planned, and regarding social protection, the introduction of digitalisation in social services, including tele-assistance. According to the strategy, the biggest challenge in developing policies for people with disabilities is ensuring opportunities for their employment and adequate support for their employers. Another challenge is the provision of accessible information and communication services.

No evidence of any experiences of persons with disabilities concerning digitalisation and digital transformation has been identified in Bulgaria. A possible explanation for the lack of evidence is that the development of policies and discussions about this topic started only in the middle of 2020, and they are still quite unpopular with state officials and the general population. No information about funding for accessibility has been identified either.

Good practices

The research in Bulgaria has not identified any good practices, strategies, policies or actions (including funding) to ensure that digitalisation and digital transformation are disability-inclusive or to address the digital divide as faced by persons with disabilities.

Recommendations

The Ministry of Transport, Information Technology and Communications of the Republic of Bulgaria (responsible for the overall implementation of the national programmes for digitalisation and digital transformation) should, together with the Ministry of Labour and Social Policy, Ministry of Education and Science and Ministry of Healthcare, plan concrete measures related to digitalisation that are targeted at persons with various disabilities, with clear deadlines, funding and indicators for implementation.

The action plan for implementation of the *National Disability Strategy* should be elaborated as soon as possible. It should contain detailed and clear measures, figures, deadlines, funding and indicators for implementation related to all fields of digitalisation enlisted in the strategy: accessibility, employment, education, healthcare, social protection and communication services.

Schools, universities and organisations providing education should inform, in an accessible manner, persons with disabilities of the available options for digital skills training and possible options for employment related to these skills.

Educational institutions and software companies should also include digital inclusion and accessibility in their training programmes for digital professionals, inclusivity and accessibility professionals and persons with disabilities.

The *National Recovery and Resilience Plan* should be introduced at the European Commission as soon as possible. During its implementation, a clear indicator for the involvement of persons with disabilities should be introduced.

2 Are government strategies and plans on digitalisation and digital transformation disability-inclusive?

2.1 Disability inclusion in generic strategies on digitalisation and digital transformation

During the period 2019-2021, several overarching strategies and national programmes concerning digitalisation and digital transformation have been adopted in Bulgaria. None of them explicitly addresses the impact of digitalisation on persons with disabilities. The strategies only mention EU funding as the main source, without including concrete figures, indicators for implementation or financial planning.

The National Programme *Digital Bulgaria 2025* (adopted in 2019)¹ is focused on modernisation and the universal introduction of intelligent IT solutions in all spheres of the economy and social life by creating an environment for the wide application of information and communication technologies (ICT); national infrastructure; innovative electronic services of a new type for business and citizens; uniform standards; and a high degree of network and information security and interoperability. According to the programme, Bulgaria scores significantly below the average in the human capital dimension, with the overall level of digital skills being among the lowest in the EU. The share of people with at least basic skills in digital technologies amounts to about 29 % of the Bulgarian population, while the EU average is 57 %. Only 11 % of people have above-basic skills, which is less than a third of the EU average. Bulgaria is also well below the average level in the implementation of digital technologies and is placed 28th in the connectivity dimension of the 2019 Digital Economy and Society Index (DESI).²

People with disabilities are mentioned in the programme in relation to aim 11 of the priority sphere, on the provision of effective and high-quality digital public services. The aim is to create conditions of equal access for all social groups, including people with disabilities, to digital public services. The main measures for achieving this aim are: effective application of the general accessibility requirements and ensuring principles and measures to be followed in creating, maintaining, and updating the websites and mobile applications of public sector organisations.³ The latter involves the transposition of Directive (EU) 2016/2102 of the European Parliament and the Council of 26 October 2016 on the accessibility of public sector bodies' websites and mobile applications.⁴ The programme does not contain any figures for funding; it mentions only that funding would be allocated by the state budget and the EU operational programmes.

The National Programme *Digital Transformation of Bulgaria during the period 2020-2030*⁵ contains an overall description and analysis of the need, and planned activities,

¹ Council of Ministers, *National Programme 'Digital Bulgaria 2025'*, adopted on 5.12.2019, available in Bulgarian at: <https://www.mtict.government.bg/bg/category/85>.

² Council of Ministers, *National Programme 'Digital Bulgaria 2025'*, p. 18.

³ Council of Ministers, *National Programme 'Digital Bulgaria 2025'*, p. 35.

⁴ Council of Ministers, *Roadmap to Digital Bulgaria 2025*, p. 26, available in Bulgarian at: https://www.mtict.government.bg/sites/default/files/uploads/it/09-12-2019_putna_karta_cifrova_bulgariya_2025.pdf.

⁵ Council of Ministers, *National Programme for Digital Transformation of Bulgaria during the period 2020-2030*, adopted in 2020, available in Bulgarian at: https://www.mtict.government.bg/sites/default/files/cifrova_transformaciya_na_bulgariya_za_period_a_2020-2030.pdf.

for digital transformation in 16 sectors – digital infrastructure, cyber security, scientific research and innovation, education and training, an adapted labour market, social protection, digital economics, transport, agriculture, culture, environment and climate, energy, healthcare, digital management, regional development and finance. People with disabilities are not specifically mentioned anywhere in it. Over 50 specific sectoral plans and programmes highlight digital transformation in detail. The review of programmes relating to education, the labour market and healthcare has identified that none of them mention people with disabilities. They are very general and superficial, and do not mention concrete figures, indicators or funding.

The updated *Strategy for the Development of E-Governance of Republic of Bulgaria 2019-2023*⁶ mentions, among other things, the principle of inclusion and accessibility in e-governance, which means that public authorities and administrations should design e-public services that are inclusive by default and meet different needs, such as the needs of older people and people with disabilities. The only other mention of people with disabilities relates to the collection and processing of data in respect of their access to social services, assistance and personal aid.

2.2 Disability inclusion in focused or sector-specific strategies on digitalisation and digital transformation

The draft *National Recovery and Resilience Plan* (version as of February 2021)⁷ consists of four pillars: innovative, green, connected and fair Bulgaria. One component of the innovation pillar is the comprehensive reform of pre-school, school education and lifelong learning. That includes, among other things, training in digital skills and creating a national online platform for adult learning, which would potentially have an impact on people with disabilities. However, no explicit reference about this has been identified. The planned funding for the innovation pillar is approximately BGN 1.5 billion (EUR 0.75 billion).⁸

The plan places a high level of ambition on the digital transition (connectivity pillar), where it concentrates more than 1/4 (28 %) of the total costs foreseen. In doing so, efforts are focused on four main priorities: (i) the deployment of broadband infrastructure; (ii) enhancing the digital skills of the population; (iii) accelerating the deployment of digital technologies in enterprises; and (iv) the deployment of e-Government and e-services. The deployment of very high capacity networks to ensure that no part of the country or group in society is left without adequate digital connectivity is considered to be at the heart of the development of a dynamic and innovative economy. By 2020, only 58 % of households had a broadband subscription (as

⁶ Council of Ministers, *Updated Strategy for the Development of E-Governance of the Republic of Bulgaria 2019-2023*, August 2019, available in Bulgarian at: <https://e.gov.bg/wps/portal/agency/strategies-policies/e-management/strategic-documents>.

⁷ Council of Ministers, draft *National Recovery and Resilience Plan of the Republic of Bulgaria*, available in English at: <https://nextgeneration.bg/14>. The ultimate objective of the *Recovery and Resilience Plan* is to facilitate economic and social recovery from the crisis caused by the COVID-19 pandemic. In pursuit of this goal, the Government groups together a set of measures and reforms that not only restore the growth potential of the economy, but also develop and enhance it, allowing in the long term the achievement of the Government's strategic goal of convergence of the economy and incomes with EU average levels. At the same time, the plan lays the basis for the green and digital transformation of the economy, in the context of the ambitious Green Deal objectives.

⁸ Council of Ministers, draft *National Recovery and Resilience Plan of the Republic of Bulgaria*, p. 25.

compared with an EU average of 78 %), and the spread of fixed broadband at a speed of at least 100 Mbps is at only 11 % (compared with 26 % for the EU overall). In addition, Bulgaria lags behind in terms of the 5G entry readiness indicator, distributing only 14 % of the spectrum for wireless broadband, according to the 2020 DESI.⁹ According to the plan, one of the main reasons for the slowdown in digitalisation in Bulgaria (along with insufficient investment in digital infrastructure and the shortage of ICT professionals) is the low level of digital skills among the population. Only 11 % of the population possess IT skills above basic level, and more than 2/3 do not even have basic digital skills as elaborated by the European Commission in its 2017 publication *DigComp 2.0 – The Digital Competence Framework for Citizens*.

People with disabilities are mentioned around 10 times in the 214-page draft *National Recovery and Resilience Plan*, mainly in relation to the development of social services, such as the development of family-type accommodation centres and day care centres for adults with disabilities who would be deinstitutionalised. The first mention relates to the digital connectivity component (the indicative cost estimates needed to achieve the objectives of the component amount to a total of BGN 1 005 billion (EUR 0.5 billion). The ongoing reform envisages changes in the strategic framework (an updated national plan for broadband access adopted by the Council of Ministers, as well as the strategic framework document, *Digital Transformation of Bulgaria for the period 2020 – 2030*, approved by the Council of Ministers) and in the legislation (amendments to the Electronic Communications Act). It states that “a draft law amending the Electronic Communications Act will achieve, among other outcomes, the improvement of protections of the interests of citizens and the rights of end users, including people with disabilities.” No information has been identified that this is related to the transposition of the EU Electronic Communication Code.

Social Inclusion

In the section of the plan on social inclusion (the ‘fair’ pillar),¹⁰ the planned reform for enhancement of the overall system for social support through codification of its objectives is targeted at overcoming the structural challenge of the low efficiency of social policy in reducing poverty and inequality. People with disabilities are one of the main target groups of the reform, representing a significant part of the population which is at serious risk of poverty and social exclusion. Almost 1/3 (29.7 % as at 2019) of people of working age but with disabilities live in material deprivation, which is almost three times higher than the EU average (10.6 %). The problems regarding the quality and accessibility of social services for people with disabilities, explained in the summary, are similar to the ones which exist in the provision of services for elderly people. Fragmentation and low levels of accessibility are among the main challenges.¹¹

⁹ Council of Ministers, draft *National Recovery and Resilience Plan of the Republic of Bulgaria*, p. 13.

¹⁰ The objective of the social inclusion component is to encourage the social inclusion of the vulnerable groups (people with disabilities, elderly people and children, persons and families in a disadvantaged situation, etc.) and to improve the quality, to extend the scope of the offered social services and to introduce integrated approaches in the provision of social services alongside with the development of integrated services. Reforms and/or investments in this component are: improving the overall system for social assistance by adopting a Code for Social Support and secondary legislation; continuing the reform in the area of social services; continuing the support for deinstitutionalisation of elderly people and people with disabilities; personal mobility and accessibility for people with permanent disability; development of regional administrative capacity for modernising the enterprises in the social and solidarity economy and introducing individualised solutions, etc.. The total cost of this component is BGN 963.5 million (EUR 482 million).

¹¹ Council of Ministers, draft *National Recovery and Resilience Plan of the Republic of Bulgaria*, p. 161.

The reform towards social inclusion envisaged in the plan includes several measures.

1. One of them is the preparation of a Code for Social Support and the necessary documentation, and its submission to the National Assembly. A joint working group was set up, with participation from representatives of the responsible institutions with professional expertise and competences in the social sphere, with the task of developing, up to 29 December 2020, a project for codification of such matters, which shall regulate social relations in the system of social protection.¹² The stakeholders were involved at the time in work on the drafting of a normative act. Preliminary consultations were carried out with the social partners, the organisations of and for people with disabilities, their nationally recognised representatives, non-governmental organisations, parents' organisations and the National Association of Municipalities. The Code shall regulate public relations with regard to guaranteeing the right to social support of those persons who cannot satisfy their basic needs due to health, age, social and other reasons. The social support shall include a range of measures connected with financial and/or material support and/or provision of high-quality social services and/or personal assistance. The Code was submitted to the National Assembly by the Minister for Labour and Social Policy.¹³

Secondary legislation has also undergone a process of elaboration – i.e. the Ordinance on Social Services Planning (which defines the criteria for determining the National Charter of Social Services for each of the social services, the criteria for determining the maximum number of users for all social services for which financing is ensured from the state budget and the social services that are planned at municipal level);¹⁴ the National Map of Social Services (which determines the maximum number of users of all social services, for which financing is secured from the state budget on the basis of the analysis of the municipalities regarding the needs for social services at municipal and regional level); and the Ordinance on the Quality of Social Services.

2. The plan also specifies the continuation of reform in the area of social services by implementation of the recently passed Social Services Act and the elaboration of secondary legislation, the deinstitutionalisation of institutions for persons with disabilities and the provision of personal mobility and accessibility for persons with permanent disabilities. With the implementation of the deinstitutionalisation project, 430 sites within the social infrastructure shall be supported in the process of deinstitutionalisation of the services for long-term care for elderly people and people

¹² Council of Ministers, draft *National Recovery and Resilience Plan of the Republic of Bulgaria*, p. 143.

¹³ Council of Ministers, draft *National Recovery and Resilience Plan of the Republic of Bulgaria*, p. 144. The draft of the Code of Social Support foresees the need to update the secondary legislation on its implementation: Ordinance on the terms and conditions for the granting, payment, amendment, suspension, recovery, resumption and termination of financial assistance; Ordinance on the conditions and order for performing social services; Ordinance on social services planning; Ordinance on the Quality of Social Services; Ordinance on the Standards for payment for the labour of employees, performing activities on providing social services, which are financed from the state budget; Ordinance on the conditions and order for determining the size, the granting, disbursement, modification, renewal and termination of financial assistance for covering the costs on heating during the heating season, as well as recovery of illegally paid funds; Ordinance on the Terms and Conditions for providing Personal Assistance; Tariff for the fees for issuing and renewal of a license for provision of social services; Code of Ethics of the employees performing the activities of providing social services.

¹⁴ The draft of the Ordinance was prepared and published on the site for public consultation on 14.12.2020.

with disabilities, as well as 1 200 social services. The total planned funding is BGN 753 million (EUR 376 million) and the period of implementation is 2021-2025.¹⁵ The plan does not mention a specific relation between the digital component and the social services for persons with disabilities.

3. The Personal Mobility and Accessibility project under the plan has the objective of encouraging activities for securing personal mobility and accessibility for people with permanent disability to enable their social inclusion, taking account of their specific needs. It is envisaged that technical aids, specialised software programmes, electronic technical tools to compensate for sensory deficit, adapted motor vehicles, technical and medical devices and other similar means and devices will be provided according to specific needs, and that training will be provided for the users of the technical aids and/or specialised programmes. The total planned funding is BGN 24 million (EUR 12 million) with the period of implementation 2021-2023.¹⁶

4. Another project under the plan is the development of regional administrative capacity for modernising the enterprises of the social and solidarity economy and the introduction of individualised solutions. It envisages expanding and modernising the opportunities for support to the social and solidarity economy by reforming the policy and applying an individualised approach to the needs of every single entity in the social and solidarity economy by creating focus points with territorial coverage in the six NUTS II regions of the country. An aspect of the support provided shall be the transformation of the social and solidarity economy in the context of the double (green and digital) transition. The project envisages a survey of at least 200 social enterprises regarding the possibilities for digitalisation of their work processes and assistance in implementing the recommendations made in at least 100 of them, as well as conducting training events with the workers in relation to the digital solutions that are introduced. At the same time, the project will promote the creation of networks and the conducting of training initiatives and partnerships to involve social entrepreneurs in social and civil dialogue with state institutions, local authorities and local communities. The sustainability of the results of the project will be ensured after its completion through the planned transformation of the focus points into local incubators, realised in the form of public-private partnerships, based on maintaining their functioning and through contributing available assets. This project might have an impact on sheltered employment enterprises (if they are among those in the plan) which mainly employ persons with disabilities. The overall planned funding is BGN 23.1 million (EUR 11.5 million) with the period of implementation 2021-2024.¹⁷

Healthcare

1. In the healthcare section of the plan, people with disabilities are not explicitly mentioned, but the proposed reforms would have the greatest impact on them. The first measure is the complete implementation of the National Health Information System, which will lay the foundations for e-health.

¹⁵ Council of Ministers, draft *National Recovery and Resilience Plan of the Republic of Bulgaria*, p. 146.

¹⁶ Council of Ministers, draft *National Recovery and Resilience Plan of the Republic of Bulgaria*, p. 146.

¹⁷ Council of Ministers, draft *National Recovery and Resilience Plan of the Republic of Bulgaria*, p. 147.

Phase 1 of the reform includes: an update of Ordinance 4 on the terms and conditions for prescribing and dispensing medicinal products and the Ordinance on the exercise of the right of access to medical care. The amendments envisaged to the legal framework will contribute to the development of e-health. In phase 1 of the reform, the following modules of the National Health Information System should be implemented: electronic referral for medical-diagnostic examinations; electronic prescriptions; electronic health records for citizens; national nomenclatures, national health information standards for the real-time exchange of medical data required for electronic prescriptions and electronic health records; the basic functionality of the core of the National Health Information System; a health information portal; the necessary registers for the functioning of electronic prescriptions and electronic referral.¹⁸ Phase 2 of the reform includes an update of the Ordinance of the Minister of Health on the creation and maintenance of electronic health records of citizens and the conditions and procedure for keeping registers. The following modules of the National Health Information System must be implemented: addition to the electronic referral module of all other areas included in the National Framework Agreement; building a subsystem for collecting information from hospitals; building a system for monitoring and control in healthcare; the introduction of electronic administrative services and internal administrative services; and completion of all registers.¹⁹ This reform would have a significant positive impact on people with disabilities, as it would appear to minimise the administrative burden of collection and verification of medical, diagnostic and treatment documents.

2. Another measure related to healthcare is the modernisation of the facilities and equipment, and the introduction of innovative technologies for treatment, in major state and municipal medical institutions for inpatient care. The total planned budget is BGN 578.9 million (EUR 289.5 million) with an implementation period of 2021-2024.²⁰

3. A major healthcare investment related to persons with psycho-social disabilities is the project for the modernisation and development of psychiatric care. It is aimed at improving the facilities and equipment in the psychiatric care system in order to provide quality healthcare and modern opportunities for the treatment and rehabilitation of patients, as well as develop opportunities to further their inclusion in society. The country's existing 12 state psychiatric hospitals, 12 mental health centres and 21 psychiatric clinics and wards at multidisciplinary hospitals, with a total bed capacity of about 4 000 beds, will be covered. The total planned budget is BGN 33.6 million (EUR 16.8 million) with an implementation period of 2021-2024.²¹ In the plan, there is no relation between the digital component and the improvement of the psychiatric care.

Education and training

In March 2021, the Government adopted a three-year Digital Qualification national programme, which will train current and future high school and university teachers, as well as business representatives who wish to start teaching, to use digital tools and

¹⁸ Council of Ministers, draft *National Recovery and Resilience Plan of the Republic of Bulgaria*, p. 155.

¹⁹ Council of Ministers, draft *National Recovery and Resilience Plan of the Republic of Bulgaria*, p. 156.

²⁰ Council of Ministers, draft *National Recovery and Resilience Plan of the Republic of Bulgaria*, p. 157.

²¹ Council of Ministers, draft *National Recovery and Resilience Plan of the Republic of Bulgaria*, p.157.

teach digital skills.²² The main goal is to retrain teachers in other disciplines/subjects and to train practitioners to teach subjects related to ICT and digitalisation at different levels of the education system. Teachers of various subjects in the secondary education system will be trained to become teachers of informatics and information technology. It is planned that a total of 1 000 teachers, trainers, trained teachers and lecturers in ICT-based innovative technologies, as well as those who can conduct qualification activities on these topics, will be trained in the application of the competence approach, with an emphasis on digital competencies. The programme also provides for the development of a platform for the exchange of good practices. The budget of the programme for a three-year period is BGN 2 million (EUR 1 million). Although people with disabilities are not explicitly mentioned in the programme, it is expected to have an impact on the education of children with special educational needs. The programme does not specifically mention a relation between the digital accessibility for persons with disability and the measures mentioned above.

²² Ministry of Education and Science, *National Programme: 'Digital Qualification'*, adopted on 5.03.2021, available in Bulgarian at: <https://www.mon.bg/bg/100927>.

3 Do disability strategies address the potential of and challenges pertaining to digitalisation and digital transformation?

3.1 How digitalisation and digital transformation are addressed in the national disability strategy

The *National Strategy for People with Disabilities (2021 – 2030)*²³ underlines that the smart investment of digital transformation resources gives the state a chance to improve the quality of life of persons with disabilities. More specifically, with regard to accessibility and universal design, the strategy identifies the provision of high-quality and high-tech technical aids, including appropriate computer configuration and specialised software programmes; adapted technical and medical devices; and other similar means and devices, according to the specific needs for creating an accessible environment related to communication, mobility and free movement of people with disabilities.²⁴ Scientific research targeted at the above-mentioned aids, programmes and devices will be encouraged to develop and test innovative technical aids and specialised software programmes.

Regarding healthcare for people with disabilities, the strategy aims to improve the mechanisms for providing medical devices and technical aids, including individual prostheses and orthoses and other auxiliary devices and technologies designed for the habilitation and rehabilitation of people with disabilities.²⁵

With regard to employment, the strategy plans the provision of specialised training for people with disabilities, aimed at enabling them to acquire key competencies, including digital skills needed in the labour market, as well as opportunities to increase the productivity of people with disabilities who are employed and their employability.²⁶

With regard to social protection, the strategy envisages the introduction of digitalisation in social services, including tele-assistance and various forms of electronic tools and resources.²⁷

According to the strategy, the biggest challenge in respect of the policies for people with disabilities is ensuring opportunities for their employment and adequate support for their employers.²⁸ This is due to the fact that adaptability and mobility in the work environment, as well as the application of flexible, innovative and alternative methods of workplace support for people with disabilities according to their personal characteristics and existing functional limitations, are still not sufficiently represented in Bulgaria.²⁹

Another challenge is the provision of accessible information and communication services and the transposition of the directives on the practical provision of accessible

²³ Council of Ministers, *National Strategy for People with Disabilities (2021-2030)*, p. 16, adopted on 23.12.2020, available at: <https://www.strategy.bg/StrategicDocuments/View.aspx?lang=bg-BG&Id=1342>.

²⁴ Council of Ministers, *National Strategy for People with Disabilities (2021-2030)*, p. 19.

²⁵ Council of Ministers, *National Strategy for People with Disabilities (2021-2030)*, p. 26.

²⁶ Council of Ministers, *National Strategy for People with Disabilities (2021-2030)*, p. 29.

²⁷ Council of Ministers, *National Strategy for People with Disabilities (2021-2030)*, p. 38.

²⁸ Council of Ministers, *National Strategy for People with Disabilities 2021-2030*, p. 9.

²⁹ Council of Ministers, *National Strategy for People with Disabilities 2021-2030*, p. 10.

electronic and communication services.³⁰ New EU rules are to be applied to the electronic communications sector to promote the rapid deployment of 5G and other next-generation network technologies across Europe in order to stimulate cutting-edge innovation and strengthen consumer protection in the electronic communications sector.³¹ Amendments to the Electronic Communications Act will be made to improve protection for consumers, including people with disabilities, who use electronic communications services and to transpose Directive (EU) 2018/1972 of the European Parliament and the Council of 11 December 2018. Measures are to be introduced for users with disabilities that maximise interoperability and avoid, where possible, pre-registration for access to alternative means of emergency communication; and to inform everyone about the available means of equal access to emergency communication services when travelling to another EU country. The emergency services, including the single European emergency number 112, will strive to be equally accessible to disabled end-users, according to the strategy.

The *Action Plan for Implementation of the Concluding Observations of the UNCRPD about Bulgaria (2021-2026)* contains only a few vague measures on digitalisation and digital transformation.³² As a response to the observations:

- at paragraph 24(d)³³ of the UNCRPD's *Concluding observations on the initial report of Bulgaria* report, a very broad measure is planned for the 'creation of conditions for full accessibility of information and communications including ICT' with a deadline of 2025 and responsible institutions: State Agency for E-governance; Ministry of Transport, Information and Communications; Ministry of Labour and Social Policy; Ministry of Education and Science;
- at paragraph 44(c)³⁴ of the *Concluding observations* report, the implementation of the requirements of Directive (EU) 2016/2102, transposed in the Electronic Governance Act (enforced on 29 November 2019) and in the Ordinance for general requirements to information systems, registers and electronic administrative services (enforced on 14 January 2020) and the Methodology for monitoring and checking the accessibility of the content of websites and mobile applications is planned to take place until 2021 and the responsible institution is the State Agency for E-governance.³⁵
- at paragraph 50(c)³⁶ of the *Concluding observations* report, the project Education for Tomorrow of the Operational Programme Science and Education for Smart Growth for special schools for students with sensory disabilities (impaired hearing and impaired vision) specifies the provision of assistive technologies: FM

³⁰ Council of Ministers, *National Strategy for People with Disabilities 2021-2030*, p. 11.

³¹ Council of Ministers, *National Strategy for People with Disabilities 2021-2030*, p. 43.

³² Council of Ministers, *Action Plan for Implementation of the Concluding Observations of the UNCRPD about Bulgaria (2021-2026)*, adopted on 12.02.2021, available in Bulgarian at: <https://mlsp.government.bg/konventsia-za-pravata-na-khorata-s-uvrezhdaniya-na-oon>.

³³ 'Intensify efforts to ensure full accessibility of ICT, including to all persons with all types of impairments.'

³⁴ 'Take measures to implement progressively European Union Directive 2016/2102 in order to ensure the full accessibility of websites.'

³⁵ Council of Ministers, *Action Plan for Implementation of the Concluding Observations of the UNCRPD about Bulgaria (2021-2026)*, p. 39.

³⁶ 'Intensify its efforts to ensure quality inclusive education and the provision of reasonable accommodation for students with disabilities in mainstream schools, including by allocating sufficient human, technical and financial resources for it.'

systems, reading cameras, vision control systems and others, to be introduced by 2026 by the Ministry of Education and Science.³⁷

- at paragraph 58(a)³⁸ of the *Concluding observations* report, the Employment Agency is to achieve by 2026 an increase in the number of electronic services provided to job seekers and ensure specialised labour mediation for persons with disabilities, including for remote working.³⁹
- at paragraph 68(a)⁴⁰ of the *Concluding observations* report, the National Statistical Institute, the National Insurance Institute and the relevant agencies at the Ministry of Labour and Social Policy are expected to implement by 2026 a number of studies to systematically collect data and report on procedures in the following fields: Labour Force Survey – LFS; EU Statistics on Income and Living Conditions – EU-SILC; European Health Interview Survey – EHIS; Adult Education Survey – AES; ICT usage in household and by individuals and Time management and budgeting.⁴¹

3.2 How digitalisation and digital transformation are addressed in specific disability-related strategies

No such strategies have been identified in Bulgaria. For example, the *National Healthcare Strategy for 2020*⁴² envisages only measures for the reduction of mortality rates and for increasing the average life expectancy. No measures related to digitalisation or people with disabilities are included in it. The *Strategic Framework for Education and Training in Bulgaria (2021-2030)* earmarks only two measures related to children with disabilities which possibly imply digitalisation. The measures are: provision of the necessary equipment for conducting the learning process of children/students with special educational needs and the creation and use of adapted open educational resources for children/students with special educational needs.⁴³

³⁷ Council of Ministers, *Action Plan for Implementation of the Concluding Observations of the UNCRPD about Bulgaria (2021-2026)*, p. 40.

³⁸ 'Adopt a policy framework and a strategy to promote employment for persons with disabilities in the open labour market, including by increasing resources for it, with the aim to facilitate transition from sheltered employment to the open labour market.'

³⁹ Council of Ministers, *Action Plan for Implementation of the Concluding Observations of the UNCRPD about Bulgaria (2021-2026)*, p. 42.

⁴⁰ 'Take into consideration the Washington Group Short Set of Questions on Disability when collecting information about the situation of persons with disabilities and the barriers to the exercise of their rights'.

⁴¹ Council of Ministers, *Action Plan for Implementation of the Concluding Observations of the UNCRPD about Bulgaria (2021-2026)*, p. 44.

⁴² Ministry of Healthcare, *National Healthcare Strategy for 2020*, available at: <https://www.mh.government.bg/bg/politiki/strategii-i-kontseptsii/strategii/nacionalna-zdravna-strategiya-2020/>.

⁴³ Ministry of Education and Science, *Strategic Framework for Development of Education and Training in Republic of Bulgaria (2021-2030)*, adopted on 11 March 2021, pp. 32-33, available at: <https://www.mon.bg/bg/143>.

4 Promoting disability inclusion through funding, education and training

4.1 How funding promotes disability-inclusive digitalisation and digital transformation

No evidence of disability perspectives being taken into account with regard to funding have been identified in Bulgaria.

4.2 How disability inclusion is promoted through the education and training of digital professionals

Disability inclusion does not currently seem to be promoted through the education and training of digital professionals in Bulgaria. The education programmes of several main universities and private training organisations/foundations⁴⁴ for the education and training of digital professionals were reviewed, and several interviews with software developers in high positions at leading IT companies were conducted, for the purpose of the present research. Neither the programmes, nor the interviews revealed that disability and accessibility matters are addressed in education/training or in ongoing professional development.

The *Concept for Artificial Intelligence Development in Bulgaria until 2030* report does not mention people with disabilities either, and very briefly summarises all other governmental plans, strategies and programmes relating to digital skills and digital transformation (mentioned in previous sections of this report).⁴⁵

However, several significant projects targeted at the future development of digital skills and competences among high school students and adults have been identified. Although they do not explicitly mention people with disabilities, they have the potential to involve children and adults with disabilities.

1. The 'Building a national STEM environment for the skills of tomorrow' project aims to build a comprehensive educational STEM environment in Bulgarian schools. It includes renovation, modernisation and the creation of new space enabling quality education – lab complexes, project competence and a teamwork environment beyond the classical classroom environment. The project builds on the achievements following the successful launch of the national programme *Building a school STEM environment*. Laboratories for acquiring skills and undertaking project work will be developed and upgraded in the educational environment by introducing modern equipment for experimental work in all STEM

⁴⁴ For example, Ministry of Education and Science, *National Programme 'Training for IT careers: IT courses for software developers for high school students'*, available at: <https://it-kariera.mon.bg//e-learning/course/view.php?id=2#section-3>; Software Academy (private training company leading in IT); 'Training courses for digital professionals', available at: <https://softwareacademy.bg/index.php?q=courses>; Sofia University, Mathematics and IT Department, 'Training programme for IT professionals', available at: https://learn.fmi.uni-sofia.bg/pluginfile.php/138209/mod_resource/content/0/%D0%A3%D1%87%D0%B5%D0%B1%D0%BD%D0%B0%20%D0%BF%D1%80%D0%BE%D0%B3%D1%80%D0%B0%D0%BC%D0%B0%20-%20%D0%9E%D0%9E%D0%9F%20-%202016-2017.pdf.

⁴⁵ Bulgarian Academy of Science, *Concept for Artificial Intelligence Development in Bulgaria until 2030*, August 2020, available in Bulgarian at: <https://www.mtict.government.bg/bg/category/157/koncepciya-za-razvitiето-na-izkustveniya-intelekt-v-bulgariya-do-2030-g>.

areas, and by introducing digital technologies, including those that enable interdisciplinary, synchronous and asynchronous work, mainly with the aims of improving digital literacy and motivation to learn and encouraging interest and skills in the disciplines and areas of natural and engineering sciences, artificial intelligence, robotics, IT and life sciences, as well as linguistic knowledge, knowledge in the field of arts, etc. The project will contribute to promoting digital skills and equal access to education. The total planned budget is BGN 552.4 million (EUR 276.2 million) and the implementation period is 2021-2025.⁴⁶

2. The 'Trainings for digital skills and building a national online platform for adult learning' project will be implemented in two components – 1. provision of training for the workforce in acquiring and validating basic digital skills and competences tailored to new labour market needs and the penetration of digital technologies in economic processes, and 2. design and implementation of a virtual online learning platform. Free and generally accessible training for persons in the target group (unemployed and employed persons) for acquiring the necessary basic digital skills and competences is motivated by the current extremely low levels of those skills in Bulgaria. A uniform curriculum, as well as uniform training resources and assessment tools, will be designed for the purposes of the trainings in accordance with the *DigComp 2.1* framework. Trainings will be provided by training organisations registered in the electronic module of the virtual online learning platform (to be created simultaneously). The total planned budget for this component is BGN 192 million (EUR 96 million) and the implementation period is 2021-2026.

The creation of a virtual online learning platform aims to improve the quality and employability of the workforce by expanding access and providing more opportunities for quality learning, making use of the opportunities offered by digital technologies. The key activities planned include building and developing a virtual online learning platform; designing methodologies and e-content; holding trainings for trainers; and building and supporting a network of digital clubs furnished with modern computer equipment, other devices and internet access, where persons, assisted by mentors, will be able to use the equipment to participate in electronic and distance learning.

Digital clubs will be built/adapted locally in municipal buildings, district information centres, libraries, Labour Office directorates, etc., across the country. Digital clubs will offer free access to all interested persons, with priority given to individuals who do not have their own equipment and internet access and would not otherwise have access to the virtual online learning platform. The total planned budget for this component is BGN 87.5 million (EUR 43.7 million) and the implementation period is 2021-2026. The total planned budget for the whole project is BGN 279.5 million (EUR 140 million) and the implementation period is 2021-2026.⁴⁷

3. The 'Establishment of centres for personal development of pupils and youth, in support to the sustainable recovery of municipalities' project will support the formation, development and realisation of pupils and young people by building multifunctional centres that provide both modern facilities and the application of

⁴⁶ Council of Ministers, draft *National Recovery and Resilience Plan of the Republic of Bulgaria*, p. 30.

⁴⁷ Council of Ministers, draft *National Recovery and Resilience Plan of the Republic of Bulgaria*, p. 33.

innovative approaches in working with these age groups. The model for construction of youth centres in the cities of Plovdiv, Stara Zagora, Dobrich and Vratsa will be followed and upgraded with the support of the Financial Mechanism of the European Economic Area. Specific activities and policies targeted at young people will be designed and pursued towards improvement of digital competences, development of entrepreneurial literacy, general and financial literacy, development of specific soft skills supporting social inclusion and employability. The project provides for the inclusion of at least 15 000 pupils and youth in the centre and at least 2 000 young people receiving training for improvement of their professional competence, including in the digital, financial and entrepreneurial fields. The total planned budget is BGN 60 million (EUR 30 million) and the implementation period is 2021-2026.⁴⁸ In order to have a lasting impact on the education reform, the projects will complement the activities under the *Education Programme 2021-2027* for the digital transformation of education and promotion of educational innovation in pre-school and school education.

4.3 How digital inclusion and accessibility is addressed in the education and training of accessibility and inclusion professionals

The present research has identified no evidence that digital inclusion and accessibility is addressed during the education and ongoing professional development of accessibility and inclusion professionals. A number of education programmes for inclusion professionals in leading universities have been reviewed, and they do not include a digital inclusion component.⁴⁹

However, strategic documents for education and training that are currently in the process of elaboration do include such components. These are:

1. The draft *Strategic Framework for development of education, training and learning in the Republic of Bulgaria (2021-2030)*. The draft document lays down fundamental principles and priorities for the development of the education system up to 2030. In the area of preschool and school education, specific goals are formulated, along with activities and measures for their implementation, in order to achieve greater access to education, enhanced coverage, improved quality, career guidance and digitalisation of the learning process.

⁴⁸ Council of Ministers, draft *National Recovery and Resilience Plan of the Republic of Bulgaria*, p. 33.

⁴⁹ For example, Sofia University, 'Masters programme for occupational therapists for children and adults with disabilities', available in Bulgarian at: https://fnoi.uni-sofia.bg/?page_id=6237; New Bulgarian University, 'Masters programme for occupational therapists in inclusive education', 27.03.2021, available in Bulgarian at: <https://news.nbu.bg/bg/events/profesionalno-kvalifikacionna-programa-ergoterapiq-v-priobshtavashoto-obrazovanie!49053>, Plovdiv University, 'Information technologies used by people with learning disabilities' (the e-course programme is not available for review by persons who are not registered by the university), available in Bulgarian at: <https://e-learning.uni-plovdiv.bg/course/index.php?categoryid=27>; Veliko Turnovo University, 'Master programme in psycho-social rehabilitation for people with disabilities', available in Bulgarian at: <https://www.uni-vt.bg/bul/spec/specinfo.aspx?sptype=2&tab=azb&mc=3040053&fmc=30400533&specname=%D0%9F%D1%81%D0%B8%D1%85%D0%BE-%D1%81%D0%BE%D1%86%D0%B8%D0%B0%D0%BB%D0%BD%D0%B0%20%D1%80%D0%B5%D1%85%D0%B0%D0%B1%D0%B8%D0%BB%D0%B8%D1%82%D0%B0%D1%86%D0%B8%D1%8F>.

2. The *Strategy for development of higher education in the Republic of Bulgaria for the period 2021-2030*. The following areas of reform are prioritised: improving the quality by upgrading training content, methods and forms and accelerated modernisation and digitalisation of educational approaches, methods and practices.

4.4 How digital inclusion is addressed via the training of people with disabilities

The present research has not identified any evidence that people with disabilities are able to access training to gain or improve knowledge and understanding of using digitalisation and digital transformation at present.

5 The opportunities and challenges presented by digitalisation and digital transformation to the rights of persons with disabilities

5.1 The most significant opportunities presented by digitalisation and digital transformation for persons with disabilities

Unfortunately, the present research identified only one statement from 11 NGOs working in different fields, including the rights of persons with disabilities, in Bulgaria, relating to the opportunities presented by digitalisation and digital transformation in the draft *National Recovery and Resilience Plan*. The statement suggests that the following measures are introduced in the plan:

- introduction of digital and other modern mechanisms for promoting civic participation and guaranteeing the quality and effectiveness of public consultations and good, fair governance at municipal and national level – proposal by the Civic Participation Forum;
- development of forms of civic participation through the use of various digital tools, ensuring open and good governance of e-government and support for the digitalisation of civil society organisations - proposal from the Bulgarian Centre for Non-Profit Law;
- using the resources of civil society organisations to increase the capacity of public institutions in creating effective measures for the inclusion of disadvantaged groups - a proposal from the National School of Management;
- mandatory partnership by NGOs working in the social and health sphere - patient organisations, organisations of people with disabilities, etc. in the implementation of the planned reforms - a proposal by the Diabetes and prediabetes NGO.⁵⁰

Another aspect that could potentially have an impact on NGOs working with people with disabilities is the global programme TechSoup (the sole representative of which is the Workshop for Civic Initiatives Foundation), which is a platform cooperating on digitalisation of the NGOs. TechSoup Bulgaria provides donations of technological resources to NGOs, community centres and public libraries in Bulgaria. Bulgarian organisations can benefit from a number of licensed software products owned by technology market leaders, such as Microsoft, Adobe, Autodesk, Symantec Desktop, Tableau, Bitdefender, CleverReach and Veritas, as well as the first Bulgarian donor company: Superhosting. TechSoup Bulgaria also collaborates with Google in its programme for NGOs, validating the applicant organisations for the following programmes: AdGrants, YouTube for Nonprofits and Google Apps.⁵¹

However, all the programmes/projects for digitalisation in high schools and universities as well as adult learning online platforms and digital clubs, e-health and social services do not contain a specific focus on persons with disabilities, and at present the role of NGOs in the planning and provision of such services is unclear.

⁵⁰ Bulgarian Centre for Non-Profit Law and 10 other NGOs, 'Statement about the draft Recovery and Resilience Plan', 1.12.2020, available in Bulgarian at: <http://bcnl.org/opinions/stanovishte-za-plana-za-vazstanovyavane-i-ustoychivost.html>.

⁵¹ See <https://www.techsoup.bg/node/15291>.

5.2 The most significant challenges faced by persons with disabilities in relation to digitalisation and digital transformation

No evidence concerning the digital divide in Bulgaria has been identified with regard to persons with disabilities. Again, no reports or other sources produced by NGOs which mention the challenges faced by persons with disabilities in relation to digitalisation and digital transformation have been found. The immediate challenges of the impact of poverty continue to be the priority in addressing the needs of people with a disability.

6 Conclusions and recommendations

6.1 Conclusions

Bulgaria lags significantly behind most other EU countries in digitalisation and digital transformation. National strategies, plans and programmes in this regard are too vague and superficial and do not contain concrete measures, timelines, funding or indicators for implementation. These policy documents do not pay specific attention to persons with disabilities. The policies are very recent, and it is not yet clear how their impact will be monitored or evaluated.

The *National Disability Strategy* (adopted at the end of 2020) and the *Action Plan for Implementation of the Concluding Observations of the UNCRPD* (adopted in 2021) contain certain measures related to digitalisation and persons with disabilities in different fields of life, but again these measures are too broad, with no concrete indicators for implementation.

The only document that contains concrete projects, funding and objectives is the draft *National Recovery and Resilience Plan*, but it is still being discussed and was introduced in the newly elected Parliament only on 16 April 2021.⁵²

The education and training, and the ongoing professional development, of digital professionals and inclusivity and accessibility professionals as well as persons with disabilities does not address digital inclusion and accessibility for persons with disabilities.

Even NGOs of and for persons with disabilities are still not active in the digitalisation field, and no statements or resources by NGOs on the topic have been identified.

6.2 Recommendations

The Ministry of Transport, Information Technology and Communications of the Republic of Bulgaria (responsible for the overall implementation of the national programmes for digitalisation and digital transformation) should, together with the Ministry of Labour and Social Policy, Ministry of Education and Science and Ministry of Healthcare, plan concrete measures relating to digitalisation targeted at persons with various disabilities, with clear deadlines, funding and indicators for implementation.

The *Action Plan for Implementation of the National Disability Strategy* should be elaborated as soon as possible and should contain clear and detailed measures, figures, deadlines, funding, indicators for implementation, outcomes and monitoring of the impact relating to all fields of digitalisation highlighted in the strategy: accessibility, employment, education, healthcare, social protection and communication services.

Schools, universities and organisations providing education should inform persons with disabilities, in an accessible manner, of the available options for trainings in digital skills

⁵² Parliament, 16.04.21, Draft Recovery and Resilience Plan (in Bulgarian), http://193.109.55.85/16_04_2021/Plan%20za%20vastianoviavave%20i%20ustojchivost%20na%20RB/.

and possible options for employment related to generic skills and disability-centric learning skills.

Educational institutions and software companies should also include digital inclusion and accessibility in their training programmes for digital professionals and inclusivity and accessibility professionals as well as persons with disabilities.

The *National Recovery and Resilience Plan* should be introduced at the European Commission as soon as possible, and during its implementation a clear indicator for the involvement of persons with disabilities should be introduced.

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