



Digitalisation and digital transformation in Germany

Implications for persons with disabilities

June 2021

EUROPEAN COMMISSION

Directorate-General for Employment, Social Affairs and Inclusion

Directorate D — Social Rights and Inclusion

Unit D3 — Disability and Inclusion

European Commission

B-1049 Brussels

Digitalisation and digital transformation in Germany

Implications for persons with disabilities

Marianne Hirschberg
Felix Welti¹

This report has been developed under Contract VC/2020/0273 with the European Commission.

¹ We gratefully thank Clarissa von Drygalski and Peter Litschke for their profound support.

LEGAL NOTICE

Manuscript completed in June 2021

This document has been prepared for the European Commission however it reflects the views only of the authors, and the European Commission is not liable for any consequence stemming from the reuse of this publication. More information on the European Union is available on the Internet (<http://www.europa.eu>).

The European Commission is not liable for any consequence stemming from the reuse of this publication.

Luxembourg: Publications Office of the European Union, 2021

© European Union, 2021



The reuse policy of European Commission documents is implemented based on Commission Decision 2011/833/EU of 12 December 2011 on the reuse of Commission documents (OJ L 330, 14.12.2011, p. 39). Except otherwise noted, the reuse of this document is authorised under a Creative Commons Attribution 4.0 International (CC-BY 4.0) licence (<https://creativecommons.org/licenses/by/4.0/>). This means that reuse is allowed provided appropriate credit is given and any changes are indicated.

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	10
3	Do disability strategies address the potential of and challenges pertaining to digitalisation and digital transformation?	13
	3.1 How digitalisation and digital transformation are addressed in the national disability strategy	13
	3.2 How digitalisation and digital transformation are addressed in specific disability-related strategies	15
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	19
	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	20
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	22
6	Conclusions and recommendations	26
	6.1 Conclusions	26
	6.2 Recommendations.....	26

1 Executive summary

There is one Government-led digitalisation strategy, which was issued in 2018 and has been regularly revised: *Digitalisierung gestalten – Umsetzungsstrategie der Bundesregierung* (Shaping digitalisation: the Federal Government’s implementation strategy).

The law that was intended to implement the European Accessibility Act (Directive (EU) 2019/882), the Strengthening Accessibility Act (*Barrierefreiheitsstärkungsgesetz*), has been criticised for being too weak in comparison to the Directive, with the period of transition considered as being too long.

In the general Government-led digitalisation strategy, neither accessibility nor the inclusion of persons with disabilities is mentioned explicitly. There are no inclusive devices, measures or any other factors referred to either.

Only in the National Action Plan 2.0 for the implementation of the UN Convention on the Rights of Persons with Disabilities (NAP 2.0) is the participation of persons with disabilities in digitalisation addressed with regard to the implementation of the right to work. An update of the plan on the topic of ‘digitalisation and inclusion’ was announced for the end of 2020, but it has not been published yet.

In summary, given the requirement to transpose European directives into German national law, accessibility and inclusion standards are now mentioned more often in general. This is also observable in the area of e-governance, referring to the Public Sector Web Accessibility Directive.

In general, accessibility is not regarded as a prerequisite for digitalisation strategies. However, at least in public procurement, public authorities have to take into account accessibility for persons with disabilities.² The use of EU funds is bound to accessibility by Art. 7 sentence 3 Directive 1303/2013 and Art. 8 Directive 1304/2013. In the period 2014-2020 e.g. an agency was in charge to implement the Horizontal Objectives, including non-discrimination and accessibility, for the ESF funding in Germany.³

There is no official national disability strategy in Germany addressing the potential or challenges of digitalisation and digital transformation. The National Action Plans (of the Federal Government and of some of the federal states) for the implementation of the CRPD can be regarded as the instruments offering the best means of developing sector-specific disability strategies.

There are only a few examples addressing digitalisation and digital transformation, but there is no systematic strategy. In NAP 2.0, a report deals with some of the challenges and risks of digitalisation in relation to the right to work, and with regard to the right to health, some plans for the improvement of digital research on accessible medical practices are mentioned.

² § 121 sec 2 Gesetz gegen Wettbewerbsbeschränkungen (GWB) – Act against restraints of competition; §§ 23 Abs. 4, 43 Abs. 2 Nr. 1 Unterschwellenvergabeverordnung (UVgO) and Länder regulations, see Carstens, Barrierefreie Informationstechnik, RN 48, in Brockmann/ Deinert/ Luik/ Welti (Ed.), Stichwortkommentar Behindertenrecht, 3rd Ed., 2022.

³ <https://www.esf-querschnittsziele.de/english/>.

Regarding the latest update of the NAP, the Interim Report on the plan, from 2018, has been updated for 2021 and contains some new measures dealing with digitalisation in different areas of life but, again, there is no systematic discussion of the opportunities and risks of digitalisation for the equal participation of persons with disabilities in society.

There is no systematic discussion of the experiences of persons with disabilities with regard to *digitalisation and digital transformation*.

At least, within the framework of IT and media education, digital skills are taught in special schools and in general schools. The extent to which there is a deeper focus on digitalisation depends on the type of school and varies among the federal states.

Good practices

Digital accessibility for the public sector is broadly regulated by the Act on Equal Opportunities for Persons with Disabilities (*Behindertengleichstellungsgesetz, BGG*) and in the Regulation for accessible Information Technology (*Barrierefreie Informationstechnik-Verordnung 2.0*).

The *Eighth Government Report on Older People*, published in 2020 by the Federal Ministry for Family Affairs, Senior Citizens, Women and Youth, could also be regarded as relevant for the situation of persons with disabilities. However, it does not address the special situation of older disabled persons explicitly.

Although accessibility and universal design are not compulsory in the education and training of digital professionals, there is an interdisciplinary degree programme on universal design at the Frankfurt University of Applied Sciences, linking the disciplines of architecture, computer science and social work, which helps develop inclusive solutions for people with disabilities for a self-determined and independent lifestyle.

Recommendations

- First of all, accessibility and inclusion of persons with disabilities should be added to the Government-led digitalisation strategy.
- Secondly, the Strengthening Accessibility Act should be improved, with accessibility being made compulsory for a wider array of services and products, and the period of transition should be condensed. The regulations under the Act should be drafted swiftly and with the participation of disabled persons' organisations.
- Thirdly, inclusive digital strategies should be developed in relation to all individual rights – the rights to work, to education, to health, etc. – instead of separating off the issue of digitalisation for persons with disabilities under the National Action Plan for the implementation of the CRPD.

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

In 2018, the Federal Government issued an implementation strategy for shaping the digital transformation – the digitalisation strategy – which has been regularly revised.⁴ The strategy connects digital policy concepts from the past few years, which were dealt with in the Digital Agenda 2014-2017 and by the reports of the Bundestag's Commission of Inquiry on the Internet and Digital Society (2010-2013).⁵ The digitalisation strategy comprises a package of measures focusing on digital competence, infrastructure and equipment, innovation and digital transformation, society in digital transformation and the modern state. In addition, the ministries can implement further digital policy measures in their areas.⁶ It should be pointed out that the topics of security and equality accompany all priority areas as fundamental prerequisites. Accessibility is not mentioned in this context, so it is apparently not given equal weight. Accessibility is only mentioned a few times in the strategy, mainly in the area of e-governance,⁷ which is a focus of the strategy (for more details, see 2.2). Overall, the digitalisation strategy contains general objectives with planned implementation steps, but without generally stipulating these in a binding manner.

The participation of persons with disabilities is only addressed in the area of working life by referring to the National Action Plan 2.0 for the implementation of the UN Convention on the Rights of Persons with Disabilities (NAP 2.0).⁸ The increase in participation opportunities for persons with disabilities is stated as an objective, which is to be achieved through various implementation steps and digitalisation projects, especially for people with sensory and mobility impairments.⁹ This includes the update of NAP 2.0 on the topic of 'Digitalisation and Inclusion', which should have been published at the end of 2020, but is not yet available.¹⁰ In the development of NAP 2.0, the broad participation of civil society, in particular that of representative organisations of persons with disabilities, was recognised as a crucial step for a successful package of measures that meets the needs of persons with disabilities, in accordance with the requirements of the CRPD. For the update of NAP 2.0, 'inclusion days' were organised at the beginning, which served as an exchange between various actors in disability policy and disability work with civil society representatives.¹¹

⁴ Federal Government (2020), Shaping digitalisation – Implementation strategy of the Federal Government (Digitalisierung gestalten – Umsetzungsstrategie der Bundesregierung); see also <https://www.digital-made-in.de/dmide>.

⁵ Final Report: BT-Drs. 17/12550, 05.04.2013.

⁶ Federal Government (2020), p. 8.

⁷ Federal Government (2020), pp. 166, 187, 208 and 210.

⁸ NAP 2.0 (2016): BT-Drs. 18/9000, 29.06.2016.

⁹ A brief report on the opportunities and risks of the digitalisation of the world of work for the employment of people with disabilities was produced in 2016: Engels, D. (2016), *Chancen und Risiken der Digitalisierung der Arbeitswelt für die Beschäftigung von Menschen mit Behinderung*, <https://www.ssoar.info/ssoar/handle/document/47065>.

¹⁰ Federal Government (2020), p. 173.

¹¹ Inclusion Days 2018, with the motto 'inclusive digital' (19-20.11.2018), https://www.gemeinsam-einfach-machen.de/GEM/DE/AS/Leuchttuerme/Kongresse/Inklusionstage_2018/Inklusionstage_2018_node.html.

However, further steps are needed on the participation of people with disabilities in working life. With regard to the accessibility of web content and apps offered by private companies and service providers, there are no legal provisions so far, despite the requirements of the CRPD (Art. 4(1)(a) in conjunction with Arts. 9(2)(b), 4(e) and 21(c)). This was also criticised by the UN Committee on the Rights of Persons with Disabilities in its concluding observations on Germany's initial report.¹²

Progress in this direction can be expected through the European Accessibility Act (Directive (EU) 2019/882).¹³ The law that implements this directive has already been passed by the Bundestag (the Strengthening Accessibility Act – *Barrierefreiheitsstärkungsgesetz*).¹⁴ In general, representative organisations of persons with disabilities criticised it, alleging that it does not go beyond the minimum necessary implementation, does not include structural accessibility requirements for the whole private sector and contains excessively long transition periods.¹⁵ The draft version of the act was discussed in the parliamentary committee for labour and social affairs (17 May 2021). Several experts were invited and heard, especially members of the CRPD monitoring body, of the German Institute of Human Rights, and of different organisations of disabled people.¹⁶ Several experts, including those from the German organisation of blind and visually impaired persons (DBSV), the Deaf Persons Organisation (DGB), the LIGA Selbstvertretung, ISL, VdK, and SoVD, demanded a shorter period of transition, as the suggested time of up to 15 years (from 2025 onwards) would be much too long, given the need for accessible products and structures.¹⁷ The expert from the CRPD monitoring body focused on the aim of the law, claiming that everything should be accessible until 2030.¹⁸ Furthermore, the experts criticised the fact that the market surveillance is carried out by *Länder* authorities and not by a federal authority. However, they welcomed the fact that the definition of 'accessibility' was aligned with that used for the public sector in the BGG, and a class action suit and an arbitration procedure for disabled people's organisations (DPOs) concerning (digital) accessibility in the private sector have been newly established under the law.

On 20 May 2021, the Federal Parliament discussed and passed the law. The draft version of the Strengthening Accessibility Act was approved with few amendments and

¹² UN Committee on the Rights of Persons with Disabilities, 'Concluding observations on the initial report of Germany' (CRPD/C/DEU/CO/1), 13.05.2015, Paras. 9 and 21.

¹³ Directive (EU) 2019/882 of the European Parliament and of the Council of 17 April 2019 on the accessibility requirements for products and services (European Accessibility Act), OJ L 151, pp. 70-115, <https://eur-lex.europa.eu/eli/dir/2019/882/#>.

¹⁴ *Gesetzentwurf der Bundesregierung: Entwurf eines Gesetzes zur Umsetzung der Richtlinie (EU) 2019/882 des Europäischen Parlaments und des Rates über die Barrierefreiheitsanforderungen für Produkte und Dienstleistungen und zur Änderung des Jugendarbeitsschutzgesetzes*, BT-Drs. 19/28653, 19/04/2021, and BT-Drs. 19/29893, 12/05/2021. (Draft Law of the Federal Government of a law for the implementation of Directive 2019/882 of the European Parliament and of the Council on the accessibility requirements for products and services and to revise the Youth Work Protection Act).

¹⁵ See <https://www.reha-recht.de/infothek/beitrag/artikel/behindertenverbaende-kritisieren-geplantes-barrierefreiheitsgesetz/> (22.04.2021).

¹⁶ See https://www.bundestag.de/resource/blob/840998/e575045c51e5fd58a17b6ac246ddb11d/125_17_05_2021-data.pdf.

¹⁷ See <https://www.bundestag.de/dokumente/textarchiv/2021/kw20-pa-arbeit-soziales-barrierefreiheit-840416>; see also the statements of all experts in Ausschuss-Drucksache 19(11)1137 (12.05.2021).

¹⁸ See <https://www.bundestag.de/dokumente/textarchiv/2021/kw20-pa-arbeit-soziales-barrierefreiheit-840416>.

a declaration, calling on the *Länder* to let DPOs participate in the work of the market surveillance authorities.¹⁹

However, accessible information technology encompasses much more than just the internet and mobile apps. For people with disabilities to participate equally in working life, it is indispensable that IT at the workplace (electronic files, procedures for electronic case processing) is also accessible and usable without barriers. Web conferences,²⁰ e-learning, e-books and e-paper editions of daily newspapers have also become an integral part of everyday life. Here, too, accessibility must be ensured. Digital accessibility should therefore be included in NAP 2.0 as a separate field of action.²¹

No information is available on the inclusion of people with disabilities in the digitalisation strategy.

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

One focus of the digitalisation strategy can be seen in the area of e-governance.²² In this area, implementation has already taken place through corresponding legislation, primarily implementing the European requirements of the Public Sector Web Accessibility Directive.²³ Pursuant to § 12a (1), sentence 1, of the Act on Equal Opportunities for Persons with Disabilities (*Behindertengleichstellungsgesetz*, BGG), federal public authorities shall design their websites and mobile applications, including offerings on the intranet intended for employees, to be accessible. In addition, § 12a (8) BGG stipulates that public authorities' internet offerings that are published on third-party websites must also be designed to be accessible as far as possible. The Acts on Equal Opportunities for Persons with Disabilities of the *Länder* also contain largely identical provisions, e.g. Baden-Württemberg: § 10 L-BGG, §§ 1 et seq. L-BGG-DVO; Bavaria: Art. 14 BayBGG, §§ 1 ff. BayEGovV; and Hesse: Art. 14 HessBGG, §§ 1 et seq. HVBIT.²⁴

The area of e-health is recognised as an important field in the digitalisation strategy, but the rights of people with disabilities and accessibility are not addressed in this context. However, in recent years, some areas in the health sector have been digitalised, and accessibility has been enshrined in law. For example, the electronic health card (§ 291 SGB V)²⁵ was introduced, which enables the exchange of digital data between doctor, patient and other healthcare providers. For this purpose, an insured person must also be able to access the content stored on his or her health

¹⁹ BT-Drs. 19/29893 (19.05.2021); see <https://www.bundestag.de/dokumente/textarchiv/2021/kw20-de-barrierefreiheit-840244->.

²⁰ For the requirements for accessible web conferences, see the information provided by the Federal Agency for Accessibility (Bundesfachstelle für Barrierefreiheit) at: https://www.bundesfachstelle-barrierefreiheit.de/DE/Praxishilfen/Informationstechnik/Barrierefreie-Webkonferenzen/barrierefreie-webkonferenzen_node.html.

²¹ See Carstens, A., 'Barrierefreie Informationstechnik' (accessible information technology) in: Deinert, O. and Welti, F. (2021), *Behindertenrecht* (Disability Law), (3rd edition, still in publication).

²² Federal Government (2020), pp. 187, 191, 196 and 208. See also Welti, F. (2018), 'Exklusion und Inklusion durch Digitalisierung' (Exclusion and inclusion through digitalisation), *SchlHA* 2/2018.

²³ Council Directive 2016/2102, 26.10.2016.

²⁴ See Carstens (2021).

²⁵ Fifth Book Code of Social Law - Compulsory Health Insurance (Fünftes Buch Sozialgesetzbuch Gesetzliche Krankenversicherung, SGB V).

card.²⁶ According to § 311 (4) SGB V – headed ‘Statutory Health Insurance’ – compliance with the regulations on accessibility must be ensured. According to § 327 (1) No. 4 SGB V, the information and communication structure can be used beyond the applications of the electronic health card for other applications in the healthcare system, as long as accessibility for the insured person is guaranteed.²⁷ The electronic health card must be technically suitable for accessible authentication, encryption and electronic signature (§ 291(2) No. 1 SGB V).²⁸ When the electronic health card is sent to the insured person (at the latest), the statutory health insurance body must inform the insured person comprehensively and in a generally understandable, accessible form about how the electronic health card works and how it can be used (§ 291 (4) SGB V). With the entering into force of the Digital Health Care Act (*Digitale-Versorgung-Gesetz*, DVG) on 19 December 2019, an entitlement to benefits via digital health applications was established for persons covered by statutory health insurance (§§ 33a and 139e SGB V). This entitlement applies to all insured persons (not only to people with disabilities). At the same time, there is an obligation to design digital health applications (§ 334 (1) SGB V) to be accessible²⁹ and to allow access to them via the electronic health card (§ 336 (1) SGB V). The Participation Strengthening Act (*Teilhabestärkungsgesetz*),³⁰ which was passed by the Bundestag in 2021, includes digital health applications in the catalogue of benefits for medical rehabilitation (§ 47a SGB IX). So far, digital health applications have hardly been used in the field of medical rehabilitation. Through the Hospital Futures Act (*Krankenhauszukunftsgesetz*), passed on 23 October 2020, the Federal Government will provide funding for digitalisation in hospitals (§§ 14a, 14b, 19 *Krankenhausfinanzierungsgesetz* – KHG). However, accessibility is generally not a prerequisite for funding (see 4.1). For the social insurance elections³¹ in 2023, the elections of representatives of insured persons can be carried out in an electronic election procedure via the internet (online election) within the framework of a model project.³² According to § 194b (3) no. 9 SGB V, the statutory health insurance must ensure that online voting in the elections is fully accessible.³³

The Federal Ministry of Education and Research (BMBF) has drafted its own digitalisation strategy for education.³⁴ However, the strategy does not explicitly address the needs of persons with disabilities. Nevertheless, the ministry has set up funding programmes for digitalisation in vocational education and training from the European

²⁶ See § 291a Paras. 2 and 3, § 358 Paras. 1 and 2 SGB V.

²⁷ See § 291a Para. 7 S. 3 Nr. 3 SGB V a.F.

²⁸ See § 336 Para. 1 SGB V.

²⁹ See also § 5 Para. 6 of the Digital Health Application Regulation (*Digitale Gesundheitsanwendungen-Verordnung (DiGAV)*), 8.4.2020.

³⁰ *Gesetz zur Stärkung der Teilhabe von Menschen mit Behinderungen sowie zur landesrechtlichen Bestimmung der Träger der Sozialhilfe (Teilhabestärkungsgesetz)*, (Law to strengthen the participation of persons with disabilities and to designate the bodies responsible for social assistance by Länder law); see *Beschlussempfehlung und Bericht des Ausschusses für Arbeit und Soziales (recommended resolution and report of the committee for work and social affairs)*, BT-Drs. 19/28834, 21.04.2021; *Gesetzesentwurf der Bundesregierung (Draft law of the Federal Government)*, BT-Drs. 19/27400, 09.03.2021.

³¹ In the social elections, insured persons and employers decide on the composition of the self-governing bodies of the social insurance institutions. These free and secret elections take place every six years. See §§ 43 ff. SGB IV.

³² § 194a (1) SGB V. A prerequisite is that the respective statutory health insurance also provides for this in its statutes.

³³ See Carstens (2021).

³⁴ Federal Ministry for Research and Education (2019), *Digitale Zukunft: Lernen. Forschen. Wissen. – Die Digitalstrategie des BMBF (Digital Future; Learning, Researching. Knowledge. The Digital Strategy of the Federal Ministry for Research and Education)*.

Social Fund (the programme ended in 2019, but the funding will continue until 2022). Special projects focusing on inclusion through digital media were also funded within this framework (see 4.1). However, these programmes do not contain any concrete mandatory implementation steps. In specific higher education strategy documents on digitalisation, inclusion, accessibility and disability are only addressed sporadically. Moreover, accessibility is often interpreted in a purely technical way and is not seen as a basic component of a guiding principle, as is the case with the concepts of universal design or universal design for learning.³⁵

An improvement for people with disabilities in the area of digital schools could be achieved through the Digital Pact for Schools (*DigitalPakt Schule*),³⁶ which is intended to promote digitalisation in schools (see 4.1).

³⁵ Walgenbach, K and Körner, N. (2020), *Inklusion – (k)ein Thema für Hochschulstrategien zur Digitalisierung?* (Inclusion - (not) an issue for higher education strategies on digitalisation), <https://zfhe.at/index.php/zfhe/article/view/1414>.

³⁶ See <https://www.digitalpaktschule.de/de/was-ist-der-digitalpakt-schule-1701.html>.

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

There is no official national disability strategy in Germany. The closest things to such a strategy are the action plans for implementing the CRPD. Shortly after Germany ratified the Convention, the Federal Government and some of the German federal states drew up such plans. In the meantime, all federal states (some already producing their second or third editions)³⁷ as well as many municipalities, companies, authorities, universities and other institutions, have action plans for the implementation of the CRPD. These plans are usually characterised by goals and measures to improve the social participation of persons with disabilities. Civil society actors, as well as the National Human Rights Institution of Germany, advocate for the continued use and further development of human rights action plans as a means of coordinated and participatory Convention implementation.³⁸ A study comparing the action plans of the federal states of Germany concluded that the plans have improved over the years.³⁹

The first National Action Plan of the Federal Government for the Implementation of the UN Convention on the Rights of Persons with Disabilities⁴⁰ was adopted by the Federal Cabinet in June 2011.⁴¹ An evaluation of the plan was published in 2014.⁴² The Federal Government's second plan,⁴³ which is still valid today, was adopted in 2016. It contains 175 measures in 13 fields of action. The topic of digitalisation is not addressed extensively in the plan. Individual measures are listed, especially those relating to digital accessibility.⁴⁴ In the area of work, the measure to prepare a short expert report

³⁷ See <https://www.institut-fuer-menschenrechte.de/das-institut/abteilungen/monitoring-stelle-un-behindertenrechtskonvention/bund-und-laender-im-vergleich#c1628>.

³⁸ See <https://www.institut-fuer-menschenrechte.de/themen/rechte-von-menschen-mit-behinderungen/aktionsplaene>.

³⁹ German Institute for Human Rights (2020), *Zukunftspotenzial entfalten. Die Aktionspläne der Länder zur Umsetzung der UN-Behindertenrechtskonvention* (Unleashing future potential. The action plans of the Länder for the implementation of the UN Convention on the Rights of Persons with Disabilities), https://www.institut-fuer-menschenrechte.de/fileadmin/Redaktion/Publikationen/Analyse_Studie/Analyse_Zukunftspotenzial_entfalten_bf.pdf.

⁴⁰ Federal Ministry of Labour and Social Affairs (ed.) (2011), *Unser Weg in eine inklusive Gesellschaft. Der Nationale Aktionsplan der Bundesregierung zur Umsetzung der UN-Behindertenrechtskonvention* (Our path to an inclusive society. The Federal Government's National Action Plan for the Implementation of the UN Convention on the Rights of Persons with Disabilities), https://www.gemeinsam-einfach-machen.de/SharedDocs/Downloads/DE/AS/UN_BRK/NAP.pdf?__blob=publicationFile&v=3.

⁴¹ See https://www.gemeinsam-einfach-machen.de/GEM/DE/AS/NAP/NAP_10/Weg_zum_NAP/weg_zum_nap_node.html;jsessionid=2FA6C59C71894596337EDCCB250AC3D4.1_cid345.

⁴² Federal Ministry of Labour and Social Affairs (ed.) (2014), *Evaluation des Nationalen Aktionsplans der Bundesregierung zur Umsetzung der UN-Behindertenrechtskonvention. Abschlussbericht* (Evaluation of the Federal Government's National Action Plan for the Implementation of the UN Convention on the Rights of Persons with Disabilities. Final report), https://www.gemeinsam-einfach-machen.de/SharedDocs/Downloads/DE/AS/NAP-Bericht.pdf?__blob=publicationFile&v=4.

⁴³ 'Unser Weg in eine inklusive Gesellschaft'. *Nationaler Aktionsplan 2.0 der Bundesregierung zur UN-Behindertenrechtskonvention* ('Our way to an inclusive society'. National Action Plan 2.0 of the Federal Government on the UN Convention on the Rights of Persons with Disabilities), BT-Drs. 18/9000, 29.06.2016.

⁴⁴ See Federal Ministry of Labour and Social Affairs (2016), from p. 106.

on ‘Opportunities and risks of digitalisation for the employment of persons with disabilities’ is highlighted.⁴⁵ This report was published in 2016.⁴⁶ Another measure is the planned improvement of digital research possibilities on accessible medical practices.⁴⁷ The action plans of the federal states for the implementation of the CRPD barely address the issue of digitalisation.⁴⁸

In the 2018 coalition agreement of the governing parties, the CDU/CSU (Christian Democrats) and the SPD (Social Democrats), digitalisation has its own chapter, but persons with disabilities are not explicitly mentioned in it.⁴⁹ In the section on persons with disabilities, there is only a general reference to the fact that digitalisation opens up new opportunities for participation and that a focus should be set on this in the National Action Plan.⁵⁰ According to the *Interim Report on the National Action Plan on the UN Convention on the Rights of Persons with Disabilities*, also from 2018, a special focus is to be placed on the topic of ‘inclusion and digitalisation’ when updating the action plan.⁵¹ This update has been available since May 2021.⁵² The *Status Report on the National Action Plan on the Convention on the Rights of Persons with Disabilities*⁵³ sets out the implementation of the measures to date. In addition, all measures that have been newly included since the adoption of the plan are listed. Of these 119 new measures, 15 deal with digitalisation.⁵⁴ These relate to different areas of life of persons with disabilities. However, there is no systematic discussion of the opportunities and risks of digitalisation for the equal participation of persons with disabilities in society.

⁴⁵ See Federal Ministry of Labour and Social Affairs (2016), pp. 28-29.

⁴⁶ Engels, D. (2016), *Chancen und Risiken der Digitalisierung der Arbeitswelt für die Beschäftigung von Menschen mit Behinderung* (Opportunities and risks of the digitalisation of the world of work for the employment of persons with disabilities), https://www.ssoar.info/ssoar/bitstream/handle/document/47065/ssoar-2016-engels-Chancen_und_Risiken_der_Digitalisierung.pdf;jsessionid=A7D257085041801D29B81565C9AEBDE4?sequence=1.

⁴⁷ See Federal Ministry of Labour and Social Affairs (2016), p. 76.

⁴⁸ For an overview of the federal states’ CRPD action plans, see <https://www.institut-fuer-menschenrechte.de/das-institut/abteilungen/monitoring-stelle-un-behindertenrechtskonvention/bund-und-laender-im-vergleich#c1628>.

⁴⁹ See Federal Government (ed.) (2018), *Ein neuer Aufbruch für Europa. Eine neue Dynamik für Deutschland. Ein neuer Zusammenhalt für unser Land. Koalitionsvertrag zwischen CDU, CSU und SPD. 19. Legislaturperiode* (A new departure for Europe. A new dynamic for Germany. A new cohesion for our country. Coalition agreement between CDU, CDU and SPD. 19th legislative period), pp. 37-49, <https://www.bundesregierung.de/resource/blob/656734/847984/5b8bc23590d4cb2892b31c987ad672b7/2018-03-14-koalitionsvertrag-data.pdf>.

⁵⁰ See Federal Government (2018), p. 94.

⁵¹ See Federal Ministry of Labour and Social Affairs (2018), *Zwischenbericht zum Nationalen Aktionsplan zur UN-Behindertenrechtskonvention* (Interim Report on the National Action Plan on the UN Convention on the Rights of Persons with Disabilities), BT-Drs. 19/5260, 45; 25/10/2018.

⁵² See https://www.gemeinsam-einfach-machen.de/GEM/DE/AS/NAP/Statusbericht_NAP/statusbericht_nap_node.html;jsessionid=411CCD452407D73D98C27BD1FE80C826.1_cid355.

⁵³ Federal Ministry of Labour and Social Affairs (ed.) (2021), *Statusbericht zum Nationalen Aktionsplan zur Umsetzung der UN-Behindertenrechtskonvention*, (Status Report on the National Action Plan on the UN Convention on the Rights of Persons with Disabilities), https://www.gemeinsam-einfach-machen.de/SharedDocs/Downloads/DE/AS/NAP2/Statusbericht_NAP.pdf?__blob=publicationFile&v=2.

⁵⁴ See Federal Ministry of Labour and Social Affairs (2021), pp. 23-24.

In public procurement, public authorities generally have to take into account accessibility for persons with disabilities.⁵⁵ Accessibility can be a relevant procurement criterion. Also, Universal Design can be taken in account.

The use of EU funds is bound to accessibility by Art. 7 sentence 3 Directive 1303/2013 and Art. 8 Directive 1304/2013. In the period 2014-2020 e.g. an agency was in charge to implement the Horizontal Objectives, including non-discrimination and accessibility, for the ESF funding in Germany.⁵⁶

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

Accessibility

One of the most current projects in the field of disability policy in Germany is the implementation of the European Accessibility Act (EAA) (Directive (EU) 2019/882).⁵⁷ On 24 March 2021, the Federal Government passed the corresponding draft law and submitted it to the German Parliament (Deutscher Bundestag) for referral and adoption.⁵⁸ It was passed by the Bundestag on 20 May 2021.

However, the law neither sufficiently includes nor explicitly refers to the human rights design options available to national legislators. The EU directive only represents the minimum that has to be implemented. In addition, the states can include further accessibility measures in their legislation. However, the Federal Government's draft law did not go further than the minimum standards provided for in the directive, and it excludes micro-enterprises, health services, products and services used for business purposes, household appliances and the built environment from the scope of the law⁵⁹ (see Chapter 5.2 for civil society criticism of the draft law).

Older Persons

In 2020, the Federal Ministry for Family Affairs, Senior Citizens, Women and Youth published the *Eighth Government Report on Older People*, dealing specifically with

⁵⁵ § 121 sec 2 Gesetz gegen Wettbewerbsbeschränkungen (GWB) – Act against restraints of competition; §§ 23 Abs. 4, 43 Abs. 2 Nr. 1 Unterschwellenvergabeverordnung (UVgO) and Länder regulations, see Carstens, *Barrierefreie Informationstechnik*, RN 48, in Brockmann/ Deinert/ Luik/ Welti (Ed.), *Stichwortkommentar Behindertenrecht*, 3rd Ed., 2022.

⁵⁶ <https://www.esf-querschnittsziele.de/english/>.

⁵⁷ Directive (EU) 2019/882 of the European Parliament and of the Council of 17 April 2019 on the accessibility requirements for products and services (European Accessibility Act), OJ L 151, pp. 70-115, <https://eur-lex.europa.eu/eli/dir/2019/882/#>.

⁵⁸ *Gesetzentwurf der Bundesregierung: Entwurf eines Gesetzes zur Umsetzung der Richtlinie (EU) 2019/882 des Europäischen Parlaments und des Rates über die Barrierefreiheitsanforderungen für Produkte und Dienstleistungen und zur Änderung des Jugendarbeitsschutzgesetzes*, BT-Drs. 19/28653, 19.04.2021.

⁵⁹ German Institute for Human Rights (2021), *Stellungnahme zum Gesetzesentwurf des Bundesministeriums für Arbeit und Soziales zur Umsetzung der Richtlinie (EU) 2019/882 über die Barrierefreiheitsanforderungen für Produkte und Dienstleistungen* (Statement on the draft law of the Federal Ministry of Labour and Social Affairs on the implementation of Directive (EU) 2019/882 on accessibility requirements for products and services (European Disability Act)), https://www.institut-fuer-menschenrechte.de/fileadmin/Redaktion/Publikationen/Stellungnahmen/Stellungnahme_Barrierefreiheitsgesetz_EAA.pdf.

older persons and digitalisation.⁶⁰ Neither the report nor the findings and recommendations summarised in another brochure (and also published in English)⁶¹ explicitly address the special situation of older persons with disabilities. However, many of the areas of life of older people discussed in the report are relevant for older persons with disabilities: for example, digital literacy and participation, housing, protection and security, mobility, health, care and data protection.

Miscellaneous

In other policy fields, specific disability-related strategies where digitalisation has a *substantial* role could not be identified.

The concepts, programmes and strategies in the field of inclusive education focus on the joint education of pupils with and without disabilities (and, incidentally, on the maintenance of the segregated special school system). They do not address the topic of digitalisation in an appropriate way. This is the case, for example, in the chapter headed 'Education' in NAP 2.0,⁶² in the information and publications of the Standing Conference of the Ministers of Education and Cultural Affairs of the *Länder* (*Kultusministerkonferenz*, KMK) on 'Inclusion',⁶³ and in those of the Federal Ministry of Education and Research on 'Inclusive Education'.⁶⁴ On the other hand, digital strategies in the field of education, as already shown in Section 2, barely take into account the needs of pupils with disabilities. This is the case, for example, with the KMK's Education in the Digital World strategy.⁶⁵ Furthermore, the report *Education in Germany 2020 – an indicator-based report with an analysis on education in a digitalised world* does not address the special digitalisation needs of pupils with disabilities.⁶⁶

There is a similar picture in the Federal Government's inclusive labour market policy, which focuses on support for severely disabled persons, on the Budget for Work, on accessible workplace design and on the compensatory levy (and, again, the maintenance of a segregating system: the sheltered workshops for persons with disabilities).⁶⁷ However, the digitalisation strategies in labour market policies do not sufficiently take into account the needs of persons with disabilities.⁶⁸ *Forecast:*

⁶⁰ Federal Ministry for Family Affairs, Senior Citizens, Women and Youth (ed.) (2020), *Achter Altersbericht. Ältere Menschen und Digitalisierung* (Eighth Ageing Report. Older people and Digitalisation), BT-Drucks. 19/21650, 20.08.2020.

⁶¹ Federal Ministry for Family Affairs, Senior Citizens, Women and Youth (2020), *Older people and Digitalisation. Findings and recommendations from the Eighth Government Report on Older People*, <https://www.bmfsfj.de/resource/blob/159708/ed36ad230d6038b9f0a439fb03ddf35b/achter-altersbericht-kurzfassung-englisch-data.pdf>.

⁶² See BT-Drs. 18/9000, from 31.

⁶³ See <https://www.kmk.org/themen/allgemeinbildende-schulen/inklusion.html>.

⁶⁴ See <https://www.bmbf.de/de/inklusive-bildung-3922.html>.

⁶⁵ See <https://www.kmk.org/themen/bildung-in-der-digitalen-welt/strategie-bildung-in-der-digitalen-welt.html>.

⁶⁶ See Autorengruppe Bildungsberichterstattung (ed.) (2020), *Bildung in Deutschland 2020 – Ein indikatorengestützter Bericht mit einer Analyse zu Bildung in einer digitalisierten Welt* (Education in Germany 2020 – an indicator-based report with an analysis on education in a digitalised world), <https://www.bildungsbericht.de/de/bildungsberichte-seit-2006/bildungsbericht-2020/pdf-dateien-2020/bildungsbericht-2020-barrierefrei.pdf>.

⁶⁷ Federal Ministry of Labour and Social Affairs (2019), *Combined Second and Third Periodic Report of the Federal Republic of Germany on the United Nations Convention on the Rights of Persons with Disabilities*, pp. 45-50, BT-Drs. 19/11745, 18.07.2019.

⁶⁸ See, for example, <https://www.bmas.de/DE/Arbeit/Digitalisierung-der-Arbeitswelt/digitalisierung-der-arbeitswelt.html>.

Digitalised world of work, which was published in February 2021, concentrates on a demographic and economic forecast which includes the prognosis of a shortage of skilled workers in the healthcare sector and in professions that require a high level of ICT skills. It falls short of addressing the topics of disability or inclusion, or the potential of disabled persons for working in these sectors.⁶⁹

⁶⁹ Federal Ministry of Labour and Social Affairs (2021), *Aktualisierte BMAS-Prognose 'Digitalisierte Arbeitswelt'* (Updated BMAS forecast: 'The Digitalised world of work'), BMAS-Forschungsberichte 526/3.

4 Promoting disability inclusion through funding, education and training

4.1 How funding promotes disability-inclusive digitalisation and digital transformation

In the health sector, digital transformation is driven by an assumption of costs for digital aids by the rehabilitation providers. Digital aids, especially for communication and information, can be covered by a provision within the framework of rehabilitation and participation according to SGB IX – Rehabilitation and Participation. This provision was strengthened by the Act for Better Provision through Digitalisation and Innovation,⁷⁰ which came into force in December 2019. The law created a benefit entitlement for persons covered by statutory health insurance to digital health applications (§§ 33a and 139e SGB V). These apps have to be accessible themselves and via the electronic health card (§ 336 (1) SGB V).⁷¹ The provision of digital aids will be further expanded by new legislative initiatives. The Participation Strengthening Act (*Teilhabestärkungsgesetz*) includes digital health applications in the catalogue of benefits for medical rehabilitation (SGB IX), which must be designed to be accessible (§ 5 (6) of the Digital Health Applications Ordinance). The Digital Modernisation of Care Act,⁷² which was passed by the Bundestag on 6 May 2021, will implement a new procedure for reviewing the reimbursement of digital care applications and for including them in a corresponding list at the Federal Institute for Drugs and Medical Products (Bundesinstitut für Arzneimittel und Medizinprodukte). In addition, it will be possible to use digital forms for care consultations. Both care applications and care consultations are to be accessible to persons with disabilities (§ 40 a (4), § 7 a (2) SGB XI). These developments are positive, as hardly any costs for digital aids have been covered by medical rehabilitation (SGB IX) and long-term care insurance (SGB XI) so far, although there are many useful applications that can delay or prevent the move to a nursing home, for instance. Under the Hospital Future Act of 2020, the Federal Government is providing EUR 3 billion as from 1 January 2021, so that hospitals can invest in digitalisation and their IT security.⁷³ However, funding conditions are not linked to a requirement for the new digital innovations to be disability accessible.

The Federal Ministry of Education and Research has been funding programmes for digitalisation in vocational education and training through the European Social Fund since 2012. The programme ended in 2019, but funding will continue until 2022. In order to support the implementation of the goals of the CRPD, NAP 2.0 and the Federal Participation Law (*Bundesteilhabegesetz*, BTHG), funding has been provided since 2017 under this programme for projects that support persons with disabilities in learning and exercising a professional activity in the long term through the innovative use of digital media.⁷⁴

⁷⁰ *Gesetz für eine bessere Versorgung durch Digitalisierung und Innovation (Digitale-Versorgung-Gesetz – DVG)*, (Law for a better supply through digitalisation and innovation – Digital Supply Law) 9.12.2019, BGBl. I, 2562.

⁷¹ See also § 5 Para. 6, Digital Health Application Regulation, 8.4.2020.BGBl. 2020.

⁷² *Entwurf eines Gesetzes zur digitalen Modernisierung von Versorgung und Pflege*, (Draft Law on digital modernisation of supply and care) BT-Drs. 19/27652, 17.03.2021; BT-Drs. 19/29384, 05.05.2021.

⁷³ *Gesetz für ein Zukunftsprogramm Krankenhäuser (Krankenhauszukunftsgesetz – KHZG)* (Law for a Future Program Hospitals – Hospital-Future-Law) 23.10.2020, BGBl. I, 2208.

⁷⁴ Federal Ministry for Research and Education (2017), *Förderrichtlinie 'Inklusion durch digitale Medien in der beruflichen Bildung'* (Funding Guideline: Inclusion through Digital Media in Vocational Education and Training).

Digitalisation is also promoted in schools, taking accessibility into account. The Digital Pact for Schools (*DigitalPakt Schule*) of May 2019 is an administrative agreement between the Federal Government and the *Länder* that ties in with older digitalisation strategies of the Federal Ministry of Education and Research and the Standing Conference of the Ministers of Education and Cultural Affairs (*Kultusministerkonferenz*) of the *Länder*. On the basis of Article 104c of the Basic Law (*Grundgesetz*, GG), the Federal Government grants financial assistance to the *Länder* to create a digital education infrastructure. In particular, uniform interface standards are to be ensured, also to ensure accessibility ('universal design').⁷⁵

In principle, the goals and requirements with regard to accessibility under the Act on Equal Opportunities for Persons with Disabilities (*Gesetz zur Gleichstellung von Menschen mit Behinderungen*, BGG) also apply to subsidy recipients if the subsidies are awarded as institutional funding (§ 1 (3) BGG). Thus, the obligations of the BGG with regard to accessibility can be applied not only in the public sector, but also in the private sector.

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

In the education of digital professionals, disability and accessibility matters are addressed far too little. Often, the disability perspective is not taken into account during the course of education. As a result, many digital professionals do not have the necessary knowledge in this area. However, there are many seminars outside of school or university where accessibility is taught.⁷⁶ There are positive examples as well, in which the focus of education is placed on inclusive content. For example, the interdisciplinary degree programme on universal design at the Frankfurt University of Applied Sciences combines the disciplines of architecture, computer science and social work, and students work together on projects to develop inclusive solutions for people with disabilities for a self-determined and independent lifestyle.⁷⁷ Some universities have individual support centres that reduce barriers for disabled students, through coaching, the provision of special hardware and software, the implementation of accessible examinations, the conversion of teaching materials into an accessible form and the provision of advice to lecturers.⁷⁸ In this way, in addition to concrete assistance, awareness is raised in individual areas regarding the concerns of people with disabilities.

Yet the requirements for disability inclusion are not sufficiently implemented in the education of digital professionals. Accessibility and universal design should be made compulsory in the education and training of digital professionals. This would ensure that digital accessibility in IT applications is taken into account from the very beginning of the development process. This is also important with a view to implementing the Sector Web Accessibility Directive and further standards and norms for public authorities.⁷⁹

⁷⁵ See <https://www.digitalpaktsschule.de/de/was-ist-der-digitalpakt-schule-1701.html>.

⁷⁶ E.g. the Inclusion through Accessible IT advanced training course. See <https://www.bbw-seminare.de/seminarinfos/eca/21917/online-training-inklusion-durch-barrierefreie-it/>.

⁷⁷ See <https://www.frankfurt-university.de/de/studium/master-studiengange/inclusive-design-id-msc/>.

⁷⁸ E.g. the support centre at the Technical University of Middle Hesse. See <https://www.thm.de/bliz/>.

⁷⁹ See, for example, the Accessible Information Technology Regulation (*Barrierefreie-Informationstechnik-Verordnung - BITV 2.0*).

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

Within the scope of common study programmes for special needs teachers, the students learn how multimedia teaching can be designed taking into account the specific learning requirements of pupils with disabilities. Apart from that, accessibility and digital inclusion are usually not part of the training programmes. The same applies to the training of rehabilitation professionals. There is no information available on the extent to which these topics are covered within the other subjects of the training programmes. However, there are further training courses on accessibility available, which take place outside of the study programmes. Some of these are specifically for individual disciplines such as architecture⁸⁰ or IT,⁸¹ while others are multidisciplinary.⁸²

At the beginning of 2021, several organisations working in special education and rehabilitation and organisations for persons with disabilities published a memorandum, the *Pact on Inclusion 2021 (Pakt für Inklusion 2021)*, demanding support for inclusive education and digitalisation. This comprised several aspects, such as adequate technical equipment, teacher training and teaching methods and accessible universal design for schools and all other educational institutions.⁸³ This memorandum is addressed to all decision makers at federal, *Länder* and communal levels, as well as to the Standing conference of the ministers of education and cultural affairs of the *Länder (Kultusministerkonferenz)*, who mentioned neither inclusive education nor accessible digitalisation in their latest resolution on the central structure of the school system and on the collective responsibility of the *Länder* for central questions regarding education.⁸⁴

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

In schools for pupils with special needs, as well as in general schools, digitalisation knowledge and skills are taught within the framework of IT and media education in order to help people act appropriately, self-determinedly and responsibly in a multimedia society.⁸⁵ Depending on the special focus, this knowledge is deepened in specific subjects. In Bavaria, for example, pupils at special schools with a focus on

⁸⁰ E.g. advanced training course for architects. See <https://nullbarriere.de/weiterbildung.htm>.

⁸¹ E.g. the Inclusion through Accessible IT advanced training course. See <https://www.bbw-seminare.de/seminarinfos/eca/21917/online-training-inklusion-durch-barrierefreie-it/>.

⁸² E.g. Guideline for training on accessibility (*Leitfaden für Fortbildungen zur Barrierefreiheit*), <https://www.bayern.de/staatssekretarsausschuss-bayern-barrierefrei-praesentiert-leitfaden-fuer-fortbildungen-zur-barrierefreiheit-bayern-barrierefrei/>.

⁸³ See https://www.verband-sonderpaedagogik.de/startseite/meldungen/2021_03_pakt-fuer-inklusion.html.

⁸⁴ *Beschluss der Kultusminister-Konferenz (KMK) vom 15.10.2020 zur „Ländervereinbarung über die gemeinsame Grundstruktur des Schulwesens und die gesamtstaatliche Verantwortung der Länder in zentralen bildungspolitischen Fragen*, (Resolution of the Standing Conference of Ministers for Cultural Affairs of 15/10/2020 „Länder agreement on the common structure of schools and the common responsibility of the Länder in relevant questions of education policy“) https://www.kmk.org/fileadmin/Dateien/veroeffentlichungen_beschluesse/2020/2020_10_15-Laendervereinbarung.pdf, for criticism towards the KMK resolution, see: <https://www.dvfr.de/rehabilitation-und-teilhabe/meldungen-aus-der-reha-landschaft/detail/artikel/pakt-fuer-inklusion-2021-in-bildung-und-digitalisierung/>.

⁸⁵ For an example in Bavaria, see <https://www.lehrplanplus.bayern.de/uebergreifende-ziele/foerderschule>.

hearing impairment have several years of computer science as a subject.⁸⁶ Schools with a focus on mental disability teach media education as a sub-area in the subject of life-related lessons, without digital media being listed separately in the curriculum.⁸⁷

Occupational rehabilitation institutions such as vocational training centres have converted much of their learning material to digital media—which has been particularly accelerated by the coronavirus pandemic—and can thus create more individualised content. Largely, the teaching of how to use the new digital formats has been successful. However, there have been difficulties with less technically experienced rehabilitants, and the digital offer has been only partially accessible.⁸⁸

In sheltered workshops, the situation is more difficult. The disability of sheltered workers varies greatly in terms of severity and type. A recent study shows that digital content and applications in sheltered workshops can mostly only be used with one-to-one support of the workers, and that not enough professionals are available for this.⁸⁹ In addition, the professional staff did not see supporting workers to use digital media as one of their core tasks, and the purpose of using it was generally questioned. Another problem is the double mandate of the sheltered workshops between fulfilling production orders on the one hand and rehabilitation orders on the other.

⁸⁶ See <https://www.lehrplanplus.bayern.de/fachlehrplan/foerderschule/9/informatik/foerderschwerpunkt/hoeren>.

⁸⁷ See https://www.lehrplanplus.bayern.de/fachlehrplan/foerderschule/9/sach_und_lebensbezogener_unterricht/foerderschwerpunkt/geistige-entwicklung.

⁸⁸ Rehavision (2021), *Digitale Potentiale für berufliche Rehabilitation* (Digital potentials for vocational rehabilitation), from p. 4.

⁸⁹ Hartung-Ziehlke, J. (2020), *Inklusion durch digitale Medien in der beruflichen Bildung* (Inclusion through digital media in vocational education and training), from p. 141.

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

Digital participation

The COVID crisis in particular has brought digital participation to the fore. Many things in everyday life can or must be done digitally, for example:

- attending meetings, conferences, workshops and expert hearings;
- digital teaching;
- remote working;
- cultural events such as theatre, opera or museum tours;
- ordering food and other goods and services online.

Persons with disabilities can also benefit from this – for example, persons with mobility impairments or persons with phobias.⁹⁰ Like everyone else, persons with disabilities can download official forms or buy travel tickets. However, this only works if the digital offerings are accessible. At present, persons with disabilities are prevented from using digital products and services because they encounter barriers there – for example, when dialling into an online conference or watching digital television.⁹¹ This requires legal regulations and obligations, including those imposing the adoption of accessibility requirements on private providers (see Chapter 5.2 on accessibility of digital products and services). At the same time, at least for as long as not all people have the same access to digital products, persons with disabilities must have the right *not to use* digital offers and to find and use corresponding analogue services.

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

As explained in Chapters 2 to 4, persons with disabilities today often cannot benefit from digitalisation to the same extent as persons without disabilities. One reason for this is that digital offers are not comprehensively accessible. In addition, the needs and rights of persons with disabilities are not sufficiently taken into account in digitalisation strategies (see Chapter 2). What is more, digitalisation is not sufficiently addressed in disability strategies (see Chapter 3). One way to close this gap is to update the National Action Plan for the Implementation of the CRPD, which should have its focus on digitalisation. In addition, the EAA must be implemented swiftly, and the scope for providing more stringent measures than those included in the EAA must be exploited for the benefit of persons with disabilities.

⁹⁰ See Dumsky, J. (2020), 'Chancen und Risiken der Digitalisierung für Menschen mit Behinderung' (Opportunities and risks of digitalisation for persons with disabilities), *Die Neue Norm*, <https://dieneuenorm.de/kolumne/chancen-risiken-digitalisierung-behinderung/>.

⁹¹ See Network Article 3 (2020), 'Ich will nicht am digitalen Katzentisch sitzen' (I don't want to sit at the digital side table), <https://www.nw3.de/index.php/160-ich-will-nicht-am-digitalen-katzentisch-sitzen>.

In April 2021, the Federal Government published the *Third Participation Report of the Federal Government on the Living Conditions of Persons with Disabilities 2021*.⁹² Although over 800 pages long, the report only sporadically addresses the participation opportunities and challenges of persons with disabilities in relation to digitalisation, especially in connection with the coronavirus pandemic. One section deals with 'Participation opportunities via digital health services: digital inclusion'.⁹³ However, for these opportunities to succeed, persons with disabilities need appropriate internet and technical equipment. Persons with intellectual disabilities who live in residential homes are particularly disadvantaged in this regard.⁹⁴ The social foundation Aktion Mensch has set up a funding programme called Internet for All, according to which projects for persons with disabilities, children and young people and persons in particular social difficulties can apply for funding for internet access. Projects can be funded with up to EUR 10 000 for hardware, special input and output devices, support services, initial installations and special software for creating accessibility.⁹⁵

Older persons and digitalisation

Digitalisation in areas that affect the rights and participation of elder persons presents both benefits and opportunities, as well as risks and challenges.⁹⁶ In Germany, 86 % of 60-69 year olds and more than half of those over 70 regularly use the internet.⁹⁷ Among them are many persons with disabilities – and at least every third person over 65 and every second person over 80 in Germany has an impairment.⁹⁸ Especially in nursing homes or institutions for elderly people, residents encounter hurdles when using the internet: most facilities do not offer free wi-fi or digital devices for their use.⁹⁹ People who avail of digital offers must have digital competences in order to be able to assess the opportunities and risks of digitalisation. Older persons in particular, who,

⁹² Federal Ministry of Labour and Social Affairs (ed.) (2021), *Dritter Teilhabebericht der Bundesregierung über die Lebenslagen von Menschen mit Beeinträchtigungen 2021. Teilhabe – Beeinträchtigung – Behinderung* (Third Participation Report of the Federal Government on the Living Conditions of Persons with Disabilities 2021. Participation – Impairment – Disability), BT-Drs. 19/27890, 09.03.2021.

⁹³ See BT-Drs. 19/27890, 534-539.

⁹⁴ See BT-Drs. 19/27890, 538-539.

⁹⁵ See <https://www.aktion-mensch.de/foerderung/foerderprogramme/weitere-foerderangebote/internet-fuer-alle.html>.

⁹⁶ For a worldwide overview, see UN General Assembly (2017), 'Report of the Independent Expert on the enjoyment of all human rights by older persons. Robots and rights: the impact of automation on the human rights of older persons' (A/HRC/36/48), 21 July 2017, <https://documents-dds-ny.un.org/doc/UNDOC/GEN/G17/219/52/PDF/G1721952.pdf?OpenElement>.

For an overview of the German perspective, see Mahler, C., Green, C., Mosler, H., Giese, C. and Frewer, A. (eds.) (2020), *Unterstützung für ältere Menschen. Beratung – Digitalisierung – Pflegepraxis* (Support for older persons. Counselling – Digitalisation – Care Practice), Menschenrechte und Ethik in der Medizin für Ältere (Human Rights and Ethics in Health Care for the Elderly), Band 2 (Vol 2), Würzburg: Königshausen & Neumann.

⁹⁷ See Initiative D21 (ed.) (2020), *D21 Digital Index 19/20*, p. 14, https://initiated21.de/app/uploads/2020/02/d21_index2019_2020.pdf.

⁹⁸ See Federal Ministry of Labour and Social Affairs (ed.) (2016), *Zweiter Teilhabebericht der Bundesregierung über die Lebenslagen von Menschen mit Beeinträchtigungen. Teilhabe – Beeinträchtigung – Behinderung* (Second Participation Report of the Federal Government on the Living Conditions of Persons with Impairments. Participation – Impairment – Disability), BT-Drucks. 18/10940, 20.01.2017.

⁹⁹ See BAGSO (German National Association of Senior Citizens' Organisations) (2020), *Digitale Grundversorgung in Alten- und Pflegeheimen sicherstellen* (Ensuring basic digital services in old people's and nursing homes), pp. 1-2, https://www.bagso.de/fileadmin/user_upload/bagso/06_Veroeffentlichungen/2020/Stellungnahme_Digitale_Grundversorgung_in_Pflegeheimen.pdf.

unlike the younger generation, have not grown up with digital devices, need to be sensitised to the use of digital products and services.¹⁰⁰ However, for as long as not all digital offers are accessible to all people, there must also be the right *not to use* digital products and services: forms should still be available in paper form from public authorities, for instance, and it should be possible to buy tickets in person at a counter.¹⁰¹

Accessibility of digital products and services

One of the biggest concerns among the disability movement in Germany at the moment is the demand for comprehensive accessibility in general, and accessibility of digital products and services in particular, especially in the private sector. The background is the Federal Government's draft law on the implementation of the European Accessibility Act published in March 2021 (see Chapter 3.2 for more background information).¹⁰² Organisations of persons with disabilities have launched a campaign page¹⁰³ online, calling for a better accessibility law. In relation to digitalisation, they address the following challenges and problems, among others:

- an accessibility obligation for private actors offering digital products and services;
- apps to help with contact tracing during the COVID-19 pandemic, such as the Luca app, sometimes not being accessible;¹⁰⁴
- lack of accessibility of online services.

The German Institute for Human Rights, Germany's national human rights institution, criticises the lack of accessibility of digital products and services, such as those used for online trading, electronic communication, banking services, self-service terminals or long-distance transport.¹⁰⁵ Moreover, digital accessibility cannot be seen on its own, but must be considered in a broader context: what use is it if the app for calling a taxi is accessible, but the taxi itself is not?¹⁰⁶ There must therefore be a comprehensive approach that makes accessibility mandatory for all products and services, not just digital offerings.

In the field of education, textbooks are increasingly offered in digital form, but these are not always accessible, warns the Federal Monitoring Agency for Accessibility of Information Technology (*Überwachungsstelle des Bundes für Barrierefreiheit von Informationstechnik*). Digital content must be based on the four fundamental principles of digital accessibility: perceptibility, usability, comprehensibility and robustness. In addition, for sensory impaired pupils, the two-senses principle must be applied, i.e.

¹⁰⁰ See BAGSO (2020), *Ältere Menschen in der digitalen Welt* (Elder persons in the digital world), pp. 6-7,

https://www.bagso.de/fileadmin/user_upload/bagso/06_Veroeffentlichungen/2020/BAGSO_Position_spapier_Aeltere_Menschen_Digitale_Welt.pdf.

¹⁰¹ See BAGSO (2020), *Ältere Menschen und Digitalisierung* (Elder persons and digitalisation), pp. 4-5, https://www.bagso.de/fileadmin/user_upload/bagso/06_Veroeffentlichungen/2020/BAGSO-Stellungnahme_Achter_Altersbericht_Digitalisierung.pdf.

¹⁰² See Bundestag, Plenarprotokoll 19/224, 28449B.

¹⁰³ See <https://barrierefreiheitsgesetz.org/>.

¹⁰⁴ See <https://barrierefreiheitsgesetz.org/2021/03/30/luca-app-nicht-fuer-blinde-und-sehbehinderte-barrierefrei-nutzbar/nachrichten/>.

¹⁰⁵ See German Institute for Human Rights (2020), *Für mehr digitale Barrierefreiheit sorgen* (Ensure more digital accessibility), <https://www.institut-fuer-menschenrechte.de/aktuelles/detail/fuer-mehr-digitale-barrierefreiheit-sorgen>.

¹⁰⁶ See <https://barrierefreiheitsgesetz.org/2021/04/16/mal-schnell-ein-barrierefreies-taxi-rufen-ist-nicht/nachrichten/>.

learning material must cover at least two forms of perception from among seeing, hearing and feeling.¹⁰⁷

¹⁰⁷ See <https://barrierefreiheitsgesetz.org/2021/01/18/digitales-barrierefreies-lernen-im-lockdown-sicherstellen/nachrichten/>.

6 Conclusions and recommendations

6.1 Conclusions

- In relation to the policies of the Federal Government and the federal states, the implementation of the rights of persons with disabilities in connection with digitalisation could be a higher priority.
- The German Government has no clear inclusive political strategy, whether regarding digitalisation and digital transformation in general or regarding specific fields such as education, health or work.
- If different actors such as the EU or sector-specific actors as those in the health sector, for example, demand digital accessibility or an inclusive political approach or process, the German Government more or less takes up these initiatives and the proposals that are made. Without these initiatives, however, inclusive political approaches, whether in specific fields or generically, would not be made by the Federal Government or the federal states.

6.2 Recommendations

- Germany should set up a swift, effective and participative process of implementing the Accessibility Strengthening Law, which was recently passed by the Bundestag, following Directive 2019/882. The Federal Government should set up the necessary regulations in a participative process with DPOs. The *Länder* Governments should establish market surveillance authorities with DPO participation and should cooperate strongly to develop effective surveillance arrangements, especially for digital services.
- The German Federal Government and Federal Parliament should consider revising the Accessibility Strengthening Law, especially concerning the scope and the long duration of the implementation of digital accessibility in the private sector.
- Germany should intensify its efforts (digital) workplace accessibility in promoting the equal right to work, in accordance with Article 27 CRPD and Directive 2000/78/EC. This especially applies to federal labour legislation and to employers and trade unions when it comes to implementation.
- Germany should intensify its efforts to ensure (digital) accessibility in healthcare in promoting the equal right to health and the right to rehabilitation, in accordance with Articles 25 and 26 CRPD. This especially applies to federal and *Länder* social and healthcare legislation and to health insurance bodies, *Länder* authorities, practitioners, hospitals and other service providers regarding implementation.
- Germany should intensify its efforts to ensure (digital) accessibility in education in promoting the equal right to education, in accordance with Article 24 of the CRPD. This especially applies to *Länder* legislation and implementation and should be pursued by the Federal Government through the Digital Pact for Schools (Art. 104c GG).

GETTING IN TOUCH WITH THE EU

In person

All over the European Union there are hundreds of Europe Direct information centres. You can find the address of the centre nearest you at: https://europa.eu/european-union/contact_en.

On the phone or by email

Europe Direct is a service that answers your questions about the European Union. You can contact this service:

- by freephone: 00 800 6 7 8 9 10 11 (certain operators may charge for these calls),
- at the following standard number: +32 22999696, or
- by email via: https://europa.eu/european-union/contact_en.

FINDING INFORMATION ABOUT THE EU

Online

Information about the European Union in all the official languages of the EU is available on the Europa website at: https://europa.eu/european-union/index_en.

EU publications

You can download or order free and priced EU publications from: <https://publications.europa.eu/en/publications>. Multiple copies of free publications may be obtained by contacting Europe Direct or your local information centre (see https://europa.eu/european-union/contact_en).

EU law and related documents

For access to legal information from the EU, including all EU law since 1951 in all the official language versions, go to EUR-Lex at: <http://eur-lex.europa.eu>.

Open data from the EU

The EU Open Data Portal (<http://data.europa.eu/euodp/en>) provides access to datasets from the EU.

Data can be downloaded and reused for free, for both commercial and non-commercial purposes.

