



# Digitalisation and digital transformation in Austria

Implications for persons with disabilities

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# **Digitalisation and digital transformation in Austria**

Implications for persons with disabilities

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## 1 Executive summary

Based upon the Austrian Government programme 2020-2024, in May 2020, Austria published a digital action plan with five fields of action (action field 1: economy, action field 2: digital state, action field 3: education, research and innovation, action field 4: health, and action field 5: security and infrastructure) and 3 goals (growth, quality of life, modern and accessible administration) and 7 principles (see chapter 2.1).

The Digital Roadmap Austria (see also chapter 2.1) for ensuring that everyone in Austria can benefit from the advantages of digitalisation lists 12 guiding principles.

Whereas the digital action plan does not explicitly focus on persons with disabilities (although the addressed fields of action are equally important for the lives of persons with disabilities), the digital roadmap does explicitly focus on persons with disabilities with regard to the field of action 'integration and inclusion'.

The Ministry of Education introduced compulsory lessons on basic digital education in all secondary I schools (10 to 14 years old) but excluded students with special educational needs from this programme (see chapter 2.2). In August 2020 an 8-Point Plan for Digital Learning was presented as a response to the COVID-19 crisis with an additional EUR 200 million for the period up to 2022.<sup>1</sup>

Government-led strategies on digitalisation and digital transformation are only to a very small extent disability inclusive. Disability inclusiveness is currently not treated as an important aspect of narrowing the digital divide, although mentioned in several policy reports such as the 2017 report on the situation of persons with disabilities in Austria.<sup>2</sup>

As a result of research done for the underlying report we conclude<sup>3</sup> that students with disabilities and / or special educational needs were excluded from compulsory basic digital education because this subject was not added to curricula for students with special educational needs as it was for regular curricula on secondary I level for 10 to 14 years old students; or the 8-Point-Plan for Digital Learning which was presented in 2020 and does not consider specific needs of students with disabilities. Furthermore, it is not clear who is responsible for implementing this plan among students with disabilities in the federal and regional departments of the educational authority.

Disability strategies (such as the National Action Plan/NAP Disability 2012-2020) address the potential or challenges of digitalisation and digital transformation only to a very small extent (NAP Disability 2012-2020: the chapter accessibility and the chapter education mention digitalisation but mostly generally and with only a few specific measures).

Non-representative case studies indicate a lack of digital education as well as a lack of up-to-date technical equipment for children as well as adults with disabilities. However, all studies emphasize the positive effects digitalisation could have on the

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<sup>1</sup> Federal Ministry for Education, Science and Research (no year). 8-Point Plan for Digital learning. See information in English [https://www.bmbwf.gv.at/en/Topics/school/krp/8\\_p\\_p.html](https://www.bmbwf.gv.at/en/Topics/school/krp/8_p_p.html).

<sup>2</sup> Sozialministerium (2017). Bericht der Bundesregierung über die Lage der Menschen mit Behinderungen in Österreich 2016, in German, p. 63.

<sup>3</sup> The de facto exclusion of children with special educational needs from compulsory basic digital education has not been discussed critically anywhere as far as we know.

inclusion of persons with disabilities in education as well as in the labour market, not least in the COVID-19 pandemic.

### Good practices<sup>4</sup>

LIFETool is a non-profit organisation that aims at providing persons with disabilities of all ages with assistive technology, particularly for communication.<sup>5</sup> LIFETool not only provides counselling, training<sup>6</sup> and support to get funding for high quality assistive and digital devices, but is also carrying out projects in research and development.<sup>7</sup> Counselling centres and teams in 5 regions make sure that the services of LIFETool are available all over Austria. However, although LIFETool cooperates with some regional authorities in the education sector it is neither linked to a government strategy or programme nor is it funded by the public sector.

In the context of the Viennese eHealth strategy 2021/2022, E-Mental Health applications and video sign language interpretation are mentioned as an opportunity for communication that should be provided.<sup>8</sup> On its website,<sup>9</sup> the sucht und drogen koordination wien argues with regard to E-Mental-Health measures that digital media have the potential of empowerment for persons with mental health challenges.<sup>10</sup>

Not part of an official strategy<sup>11</sup> but very important as it is the only accessible digital library on disability and inclusion: 'bidok'<sup>12</sup> provides accessible essays, monographs as well as lectures, and is used by more than 150 000 persons each year. In the 2017 report on the situation of persons with disabilities in Austria, 'bidok' is mentioned as best practice example for information dissemination.<sup>13</sup>

### Recommendations

Digitalisation in the context of disability policy needs to be treated in a much more profound and serious way than it has been so far. For creating disability inclusiveness, new technologies, digitalisation and digital transformation should be prominently addressed (opportunities, risks, challenges and effective measures to overcome the existing digital divide) in the new National Action Plan Disability 2022-2030 and also in overall future strategies on digitalisation in Austria.

Children with disabilities may not be excluded from digital education. Thus, compulsory basic digital education needs to be included into curricula for children with special

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<sup>4</sup> Within the scope of this study we have not identified any government-led or sponsored good practices. However, this does not mean that they do not exist; if they do exist, it would be helpful for persons with disabilities that such good practices are made public by authorities.

<sup>5</sup> See the website in English: <https://www.lifetool.at/en/home/>.

<sup>6</sup> See website in English: <https://www.lifetool.at/en/counseling/assistive-technology-centers/>.

<sup>7</sup> See website in English: <https://www.lifetool.at/en/research-development/rd-projects/current-projects/>.

<sup>8</sup> Stadt Wien (2020). Wiener eHealth Strategie 2021/2022, in German, p. 14, <https://www.wien.gv.at/gesundheit/einrichtungen/planung/pdf/wiener-ehealth-strategie.pdf>.

<sup>9</sup> In German: <https://sdw.wien/de/praevention/e-mental-health/>.

<sup>10</sup> In German: <https://mindbase.at/psychische-erkrankungen/>.

<sup>11</sup> 'bidok', founded and run by researchers with disabilities, is funded by the Sozialministeriumservice and the University of Innsbruck.

<sup>12</sup> See <http://bidok.uibk.ac.at>.

<sup>13</sup> Sozialministerium (2017). Bericht der Bundesregierung über die Lage der Menschen mit Behinderungen in Österreich 2016, in German, p. 157.

educational needs. Particular attention should be given to the equipment of children with disabilities with modern assistive devices for using digital technology. Furthermore, teachers should be trained on how to meaningfully and effectively use assistive devices for providing quality digital education to children with disabilities equally to non-disabled children. All current efforts to improve digital learning in Austria (like the 8-Point-Plan) need to be disability-inclusive. Responsibility for this in the educational authorities needs to be clarified.

## **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**

Regarding involvement of persons with disabilities in the development and implementation of the strategy, it has to be mentioned that persons with disabilities were not involved in developing strategies on digitalisation and digital transformation.<sup>14</sup>

Digital Austria is a government initiative for successful digitalisation in Austria with the goal of becoming one of the leading digital nations.<sup>15</sup> On its website,<sup>16</sup> the Federal Ministry for Digital and Economic Affairs lists internet links for information on new technologies and digitalisation in Austria. It is argued that despite education, age or gender (disability is not mentioned), every person in Austria should benefit from digitalisation. Even if disability is not mentioned, in its effect, Digital Austria has the potential to lead to disability inclusiveness.

In May 2020, Austria published a digital action plan (Digitaler Aktionsplan).<sup>17</sup> In the digital action plan,<sup>18</sup> the Federal Ministry for Digital and Economic Affairs argues that the action plan is based upon the Austrian Government programme 2020-2024 and has to be perceived as a strategic framework with regard to all issues regarding digitalisation. The Ministry argues that all projects regarding digitalisation in diverse policy fields will be brought together and implemented as a concerted package of measures.<sup>19</sup> Five fields of action are mentioned in the digital action plan: Action field 1: economy, action field 2: digital state,<sup>20</sup> action field 3: education, research and innovation, action field 4: health, and action field 5: security and infrastructure.<sup>21</sup> In addition, 3 goals (growth, quality of life, modern and accessible administration)<sup>22</sup> and 7 principles (e.g. Austria as a digital region of innovation, top-level research regarding

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<sup>14</sup> The involvement of persons with disabilities in developing those strategies is not mentioned by DPOs (such as the Austrian Disability Council/Österreichischer Behindertenrat) and/or the Federal Ministry for Digital and Economic Affairs.

<sup>15</sup> Information in German: <https://www.bmdw.gv.at/Themen/Digitalisierung/Strategien/Digital-Austria.html>.

<sup>16</sup> Information in German: <https://www.bmdw.gv.at/Themen/Digitalisierung/Strategien/Digital-Austria.html>.

<sup>17</sup> Bundesministerium für Digitalisierung und Wirtschaftsstandort/Federal Ministry for Digital and Economic Affairs (2020). Digitaler Aktionsplan, Vienna, in German, <https://www.digitalaustria.gv.at/aktionsplan.html>.

<sup>18</sup> See Bundesministerium für Digitalisierung und Wirtschaftsstandort/Federal Ministry for Digital and Economic Affairs (2020), p. 07.

<sup>19</sup> Austrian Government Programme in German: <https://www.bundeskanzleramt.gv.at/bundeskanzleramt/die-bundesregierung/regierungsdokumente.html>.

<sup>20</sup> See e.g. European Commission (2019). Digital Government Factsheet 2019 Austria. [https://joinup.ec.europa.eu/sites/default/files/inline-files/Digital\\_Government\\_Factsheets\\_Austria\\_2019\\_3.pdf](https://joinup.ec.europa.eu/sites/default/files/inline-files/Digital_Government_Factsheets_Austria_2019_3.pdf), where the disability passport is mentioned as an online form on p. 30 f.

<sup>21</sup> Bundesministerium für Digitalisierung und Wirtschaftsstandort/Federal Ministry for Digital and Economic Affairs (2020). Digitaler Aktionsplan, Vienna, p. 8, in German, <https://www.digitalaustria.gv.at/aktionsplan.html>.

<sup>22</sup> See e.g. European Commission (2020). Digital Public Administration factsheet 2020 Austria. [https://joinup.ec.europa.eu/sites/default/files/inline-files/Digital\\_Public\\_Administration\\_Factsheets\\_Austria\\_vFINAL\\_2.pdf](https://joinup.ec.europa.eu/sites/default/files/inline-files/Digital_Public_Administration_Factsheets_Austria_vFINAL_2.pdf).

digitalisation, digital communication between state and citizens), and measures and projects for implementation (no explicit measures or projects are mentioned in the digital action plan) are formulated.<sup>23</sup> It is not mentioned in the digital action plan how the implementation of the digital action plan will be financed.

On its website (English content),<sup>24</sup> the Federal Ministry for Digital and Economic Affairs argues with regard to the Austrian Digital Strategy that 'In order to de-bureaucratise life and work in Austria, the public administration is rapidly modernising and digitising. ... All administrative units are encouraged to use existing government data, streamline processes and promote mobility. The economy will thereby be supported by best practices from the broad field of digital transformation and digitalisation-friendly legal framework conditions. Furthermore, appropriate financial support offers will be created to establish Austria as an attractive and digital business location.' The German version of the website refers to the digital divide and to the risk of excluding older persons and persons with disabilities. Also, the WAI guidelines are mentioned as an integral part of the E-Government strategy.<sup>25</sup>

Also, currently, the Federal Ministry for Digital and Economic Affairs refers to digital transformation as a way to resolve the crisis.<sup>26</sup>

The 2016 Digital Roadmap Austria<sup>27</sup> lists 12 guiding principles, namely bridging the digital divide, provide digital education, respecting human rights via digital individual responsibility and civic courage, guaranteeing well-developed and affordable internet access, creating jobs through digitisation, creating a modern legal framework for digitalisation, supporting businesses with regard to digital transformation, developing new digital opportunities via science and research, playing an active role in shaping the European Digital Single Market, providing high data protection standards, ensuring respectful online discussion culture, and providing convenient, easy and accessible electronic communication with public administration. In the context of visions for Austria 2025, the Digital Roadmap is the strategy to 'ensure that everyone in Austria can benefit from the advantages of digitisation'.<sup>28</sup> This Digital Roadmap comprises 5G, the Internet of Things, Big Data, artificial intelligence, open knowledge, augmented and virtual reality, 3D printing, smart materials, intelligent energy networks (small grids), and blockchain.<sup>29</sup>

Whereas neither the Digital Austria initiative nor the digital action plan does explicitly focus on persons with disabilities, the digital roadmap does with regard to the field of action 'integration and inclusion'.<sup>30</sup> On the Digital Roadmap Austria's website,<sup>31</sup> it is

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<sup>23</sup> Bundesministerium für Digitalisierung und Wirtschaftsstandort/Federal Ministry for Digital and Economic Affairs (2020). Digitaler Aktionsplan, Vienna, p. 9, in German, <https://www.digitalaustria.gv.at/aktionsplan.html>.

<sup>24</sup> Federal Ministry for Digital and Economic Affairs website (in English): <https://www.bmdw.gv.at/en/Topics/Digitalisation/Strategy/Digital-Strategy-for-Austria.html>.

<sup>25</sup> Federal Ministry for Digital and Economic Affairs website (in German): <https://www.bmdw.gv.at/Themen/Digitalisierung/Strategien/Digitale-Strategie-für-Oesterreich.html>.

<sup>26</sup> Digital Austria website (in German): <https://www.digitalaustria.gv.at/aktionsplan.html>

<sup>27</sup> Digital Roadmap Austria website: <https://www.digitalroadmap.gv.at/en/>.

<sup>28</sup> Digital Roadmap Austria website: <https://www.digitalroadmap.gv.at/en/>.

<sup>29</sup> Digital Roadmap Austria website: <https://www.digitalroadmap.gv.at/en/>.

<sup>30</sup> Information in German: <https://www.digitalroadmap.gv.at/handlungsfelder-und-massnahmen/integration-und-inklusion/>.

<sup>31</sup> Information in German: <https://www.digitalroadmap.gv.at/handlungsfelder-und-massnahmen/integration-und-inklusion/>.

argued that the goal of digital inclusion is to provide all persons with the necessary information and knowledge for ICT to be able to reduce digital divides e.g., based upon education, gender or income. For being able to do so, a comprehensive implementing of ICT accessibility in the sense of the UN CRPD and the National Action Plan Disability 2012-2020 (see chapter 3) is necessary, in our view. Measures to implement this field of action are:<sup>32</sup> Promoting access by implementing the Web Accessibility Directive for websites and mobile applications of public sector bodies, promoting accessibility in administration, pooling initiatives of enterprises and NGOs to close the digital divide, fighting functional illiteracy, and increasing the use of Easy-To-Read Language by public authorities.

There is no information on the success of the Roadmap and whether it is still considered as a relevant policy document.<sup>33</sup>

Regarding web accessibility, in July 2019 the Web-Zugänglichkeits-Gesetz (WZG, BGBl. I Nr. 59/201); Web Accessibility Act) came into force which regulates the requirements for accessibility of websites and mobile applications of the state, and also the reporting and documentation system and the monitoring compliance with these standards.<sup>34</sup> The institution responsible for these tasks is the Forschungsförderungsgesellschaft GmbH (FFG, Austrian Research Promotion Agency) which has set up a complaint office.<sup>35</sup> The Web Accessibility Act is the direct implementation of the EU Web Accessibility Directive in Austria.

In spring 2021, a working group of the Austrian Disability Council (Österreichischer Behindertenrat) formulated proposals<sup>36</sup> on how digitalisation and artificial intelligence should be addressed in the new NAP Disability, arguing that 'digital literacy' and 'digital empowerment' for/of persons with disabilities should be pushed forward. The working group formulated goals for ameliorating disability inclusiveness of digitalisation strategies and measures such as free training courses for acquiring digital competence, accessibility as a criteria for funding in the field of ICT, 3) transfer of digital skills in the education system, legal entitlement on the federal level for assistive technologies and technical support in 2025, amendment of the catalogue of therapeutical appliances in 2022, including assistive technologies as therapeutical appliances, involvement and participation of persons with disabilities in the development of new technologies, research projects on persons with disabilities, artificial intelligence and new technologies in 2023, one-stop-shops for artificial intelligence and digitalisation in 2023, digital alphabetisation for persons with disabilities, and accessibility standards in the Web-Zugänglichkeits-Gesetz (WZG, BGBl. I Nr. 59/201); Web Accessibility Act) also for schools and kindergartens. Besides these goals, also, the working group formulated measures such as a subject of school instruction for digital competences, legal entitlement regarding assistive technologies, funding of research projects in new technologies, artificial intelligence and persons with disabilities, and the amendment of the Web-Zugänglichkeits-Gesetz (WZG, BGBl. I Nr.

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<sup>32</sup> Digital Roadmap Austria - integration and inclusion: <https://www.digitalroadmap.gv.at/en/fields-of-action-and-measures/integration-and-inclusion/>.

<sup>33</sup> The Digital Roadmap Austria website now appears as 'website used for archival purposes': <https://www.digitalroadmap.gv.at/en/>.

<sup>34</sup> Information in German: <https://www.bmdw.gv.at/Themen/Digitalisierung/Digitales-Oesterreich/Barrierefreies-Web-Internet-Zugang-fuer-alle.html>.

<sup>35</sup> Information in German: <https://www.ffg.at/barrierefreiheit/beschwerdestelle>.

<sup>36</sup> See Digitalisierung und KI. Vorschläge für den Bereich Digitalisierung und KI. In German. <https://www.behindertenrat.at/wp-content/uploads/2021/05/NAP-AG-Digitalisierung-und-KI.pdf>.

59/201); Web Accessibility Act). The working group, in a next step, formulated indicators such as the number of free training courses for digital competence for persons with disabilities, and also the number of graduates of these training courses.

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

### **Key field: Education**

In 2018, the Ministry for Education announced the development of a Masterplan Digitalisation.<sup>37</sup> At the same time, compulsory lessons for basic digital education were introduced to students on secondary I level (10 to 14 years old) and the curricula for these schools adapted. However, compulsory lessons for basic digital education were not introduced in special schools for children with disabilities, neither were the curricula for special schools adapted respectively. Thus, students with disabilities and / or special educational needs were left out of this reform. This leads to repercussions for students with special educational needs in inclusive education, too, as they are taught on the basis of the respective special school curriculum. Excluding children with disabilities and/or special educational needs from basic digital education is contradictory to the aims and measures that were defined for persons with disabilities in the Austria's digital road map in 2016 (see chapter 2.1) Furthermore, the Digital Action Plan points out that vocational pre- and in service training build upon and enforce basic digital education.<sup>38</sup> Again, young people with disabilities and / or special educational needs may experience repercussions due to their lack of basic digital education.

In August 2020, an 8-Point Plan for Digital Learning was presented as a response to the COVID-19 crisis. 'To implement the 8-Point Plan, an additional EUR 200 million will be invested in the period up to 2022'.<sup>39</sup> A new website for digital education was presented by the Ministry for Education in August 2020,<sup>40</sup> but it does not include any references to or the consideration of the needs of students with disabilities. The list of criteria for the evaluation of educational apps does not include accessibility.<sup>41</sup> A new website with educational materials for teachers, students and parents covers kindergarten, primary schools, secondary I and secondary II schools but does not include special schools or any kind of material which is specifically adapted to the needs of students with different kind of disabilities.<sup>42</sup>

A non-representative regional study on the use of distance-learning by students with disabilities was carried out during the first COVID-19 lockdown among primary school teachers who are members of a regional network for inclusive education. Teachers reported that with the support of parents and assistant students with disabilities participated well in distance learning. The students' motivation for learning and their

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<sup>37</sup> Federal Ministry Republic for Education, Science and Research (no year). Digital education. Master plan for digitalisation of education. in English:

[https://www.bmbwf.gv.at/en/Topics/school/krp/8\\_p\\_p/dig\\_edu.html](https://www.bmbwf.gv.at/en/Topics/school/krp/8_p_p/dig_edu.html).

<sup>38</sup> Bundesministerium für Digitalisierung und Wirtschaftsstandort/Federal Ministry for Digital and Economic Affairs (2020). Digitaler Aktionsplan, p. 28 Vienna, in German,

[www.digitalaustria.gv.at/aktionsplan.html](http://www.digitalaustria.gv.at/aktionsplan.html).

<sup>39</sup> See information in English [https://www.bmbwf.gv.at/en/Topics/school/krp/8\\_p\\_p.html](https://www.bmbwf.gv.at/en/Topics/school/krp/8_p_p.html).

<sup>40</sup> See <https://digitaleschule.gv.at/>.

<sup>41</sup> See <https://digitaleschule.gv.at/gutesiegel-lernapps/>.

<sup>42</sup> See <https://eduthek.at/schulmaterialien>.

independence improved and according to their teacher's opinion they were well included in the among their peers. Using digital educational media seems to motivate students to learn. The authors point out that good cooperation of school and parents is a precondition for successful distance education. Students with disabilities who did not successfully participate in distance learning lacked parental support. The authors emphasize that the successful use of digital technology and communication for education depends on necessary technical equipment and individualised educational support for students with disabilities. Students with disabilities need digital equipment as early as in primary school and should be equipped with and trained in the use of assistive technology. Thus, the authors conclude: 'Inclusive media-education as well as accessibility of educational platforms, tools and teaching materials should be included in this masterplan for all types of schools. There should be a focus on inclusive media-education and on universal design for learning in institutions for teacher training. This should cover pre-school as well as in-service training for all educators.'<sup>43</sup>

Depending on regional initiatives in the nine Austrian Laender, computer trainings or courses may be available for adults with disabilities. Unfortunately, no overall overview is available. E.g., in Tyrol, basic computer courses are offered by Innovia, a business that provides a broad range of services. For computer courses, persons with intellectual disabilities are one target group among others like persons with a low educational background or with non-German mother tongue. In May 2021, it can be chosen among the following courses: 'Computer for All' (basic training for using computers), 'ECDL' (European Computer Driving License), 'Blind typing with 10 fingers' and 'Safe use of the Internet'.<sup>44</sup>

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<sup>43</sup> Bešić, Edvina; Holzinger, Andrea (2020). Fernunterricht für Schüler\*innen mit Behinderungen: Perspektiven von Lehrpersonen. Zeitschrift für Inklusion 3 (online): <https://www.inklusion-online.net/index.php/inklusion-online/article/view/580>.

<sup>44</sup> See <https://innovia-akademie.at/angebote/computer/>.

### 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

In Austria, the National Action Plan (NAP) Disability 2012-2020 is still in use and will be replaced by a new NAP Disability in 2022.<sup>45</sup> In the NAP Disability 2012-2020, digitalisation and digital transformation are addressed in chapter 3 (accessibility) and chapter 4 (education). In chapter 3 of the NAP Disability, the digital divide is mentioned with regard to the information society.<sup>46</sup> As a positive example, measure 106<sup>47</sup> can be mentioned. Measure 106 is on the Austrian electronic network funding programme in the field of digital integration. The measure supports the market launch of electronic networks and services that in turn, promote Independent Living. The time span to be implemented is 2007-2013. In chapter 4, accessible digital forms of schoolbooks are mentioned in the context of accessibility issues of schools.<sup>48</sup>

In the interim evaluation of the NAP Disability (no scientific evaluation) it is argued that measure 106 is already implemented.<sup>49</sup>

In the evaluation of the NAP Disability 2012-2020,<sup>50</sup> it is highlighted on p. 25 that no mandatory standards for private (sector) websites exist; hence, accessibility depends by and large on voluntary commitment. With regard to monitoring and evaluation of the new NAP Disability 2022-2030, the authors of the evaluation report argue (p. 41f and p. 730f) that digital opportunities of public participation and designing an online based platform for real-time feedback on the implementation of the NAP Disability 2022-2030 is necessary.

Suggestions for measures regarding inclusive education to be included in the new NAP Disability were recently published by the Austrian Disability Council.<sup>51</sup> The term 'digital' is only used once with regard to 'digital accessibility',<sup>52</sup> but digital education or necessary technical equipment for digital education of students with disabilities are not mentioned.

<sup>45</sup> Ministry of Social Affairs (2016). National Action Plan Disability 2012-2020. Strategy of the Austrian Federal Government for the implementation of the UN Disability Rights Convention. <https://broschuerenservice.sozialministerium.at/Home/Download?publicationId=225>.

<sup>46</sup> See Ministry of Social Affairs (2016), p. 54.

<sup>47</sup> See Ministry of Social Affairs (2016), p. 55.

<sup>48</sup> See Ministry of Social Affairs (2016), p. 65. Measure 146 implicitly refers to accessible digital forms of schoolbooks, but not explicitly (Measure 146 is about readable schoolbooks for blind and visually impaired pupils).

<sup>49</sup> Sozialministerium (2015). Nationaler Aktionsplan Behinderung Zwischenbilanz 2012-2015 (in German) <https://broschuerenservice.sozialministerium.at/Home/Download?publicationId=362>.

<sup>50</sup> Bundesministerium für Soziales, Gesundheit, Pflege und Konsumentenschutz (2020). Endbericht. Evaluierung des Nationalen Aktionsplans Behinderung 2012-2020, Strategie der österreichischen Bundesregierung zu Umsetzung der UN-Behindertenrechtskonvention. Wien (in German).

<sup>51</sup> See [https://www.behindertenrat.at/wp-content/uploads/2021/04/2020-06-15-NAP-Bildung\\_HE.pdf](https://www.behindertenrat.at/wp-content/uploads/2021/04/2020-06-15-NAP-Bildung_HE.pdf).

<sup>52</sup> See [https://www.behindertenrat.at/wp-content/uploads/2021/04/2020-06-15-NAP-Bildung\\_HE.pdf](https://www.behindertenrat.at/wp-content/uploads/2021/04/2020-06-15-NAP-Bildung_HE.pdf), p. 25, 'digital accessibility' is mentioned as one principle of accessibility (besides architectural accessibility) which has to be implemented by schools and universities.

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

#### Key field: Health

In the context of the Viennese eHealth strategy 2021/2022, E-Mental Health applications and video sign language interpretation are mentioned as an opportunity for communication that should be provided.<sup>53</sup> On its website,<sup>54</sup> the sucht und drogen koordination wien argues with regard to E-Mental-Health measures that digital media have the potential of empowerment for persons with mental health challenges. The respective digital online service is MINDBASE which is a digital platform for mental health.<sup>55</sup> MINDBASE provides information on drug addiction and also on mental health challenges. The goal of MINDBASE is to effectively complement existing services for Viennese psycho-social health care via digital technologies (such as online self-help programmes, campaigning, interactive websites, apps, and also virtual clinics).<sup>56</sup>

#### Key field: Employment and work

In 2019, the Ministry of Social Affairs published a report on the impact of digitalisation - potentials and challenges - on the inclusion of persons with disabilities in the labour market.<sup>57</sup> The report includes two case studies (which are not part of an official strategy as such, but are standalone approaches to address digitalisation and persons with disabilities): one on the challenges and risks of digitalisation for persons with disabilities in Austria (18 interviews conducted), the other on the challenges and risks of platform-based work for persons with disabilities in the EU (16 interviews conducted).<sup>58</sup> Case study 1<sup>59</sup> discusses the legal framework for employment and work for persons with disabilities in Austria and sums up that the regulatory context is quite complex.<sup>60</sup> Increasing digitalisation of the labour market has the potential of having a huge impact on persons with disabilities; hence, digital employability (digitale Beschäftigungsfähigkeit) is important. The interviewees of case study 1 argued that many Austrians with disabilities have no digital education and/or training at all. Hence, it is strategically important to provide such education and training.<sup>61</sup> On the other side, new digital technologies (such as the internet) have practical impact on persons with disabilities as these technologies are able to support persons with disabilities in the labour market (being flexible regarding the workplace). Nevertheless, at the same time,

<sup>53</sup> Stadt Wien (2020). Wiener eHealth Strategie 2021/2022, in German, p. 14), <https://www.wien.gv.at/gesundheits/einrichtungen/planung/pdf/wiener-ehealth-strategie.pdf>.

<sup>54</sup> In German: <https://sdw.wien/de/praevention/e-mental-health/>.

<sup>55</sup> In German: <https://mindbase.at/psychische-erkrankungen/>.

<sup>56</sup> In German: <https://mindbase.at/psychische-erkrankungen/>.

<sup>57</sup> Bundesministerium für Arbeit, Soziales, Gesundheit und Konsumentenschutz (2019). Abschlussbericht - Auswirkungen der Digitalisierung auf die Inklusion von Menschen mit Behinderung in den Arbeitsmarkt. Zwei Fallstudien zu Österreich und zu plattformbasierter Arbeit. Wien, in German (available also in English: BMASGK (2018) Final Report - The impact of digitalisation on labour market inclusion of people with disabilities. Lessons from two case studies on Austria and platform work. Vienna.

<sup>58</sup> Bundesministerium für Arbeit, Soziales, Gesundheit und Konsumentenschutz (2019). Abschlussbericht - Auswirkungen der Digitalisierung auf die Inklusion von Menschen mit Behinderung in den Arbeitsmarkt. Zwei Fallstudien zu Österreich und zu plattformbasierter Arbeit. Wien, in German, p. 4f.

<sup>59</sup> See Bundesministerium für Arbeit, Soziales, Gesundheit und Konsumentenschutz (2019), p. 19ff.

<sup>60</sup> See Bundesministerium für Arbeit, Soziales, Gesundheit und Konsumentenschutz (2019), p. 22.

<sup>61</sup> See Bundesministerium für Arbeit, Soziales, Gesundheit und Konsumentenschutz (2019), p. 27.

working at home might increase isolation of persons with disabilities, as interviewees argued.<sup>62</sup> In the context of case study 1, two best practice examples are mentioned: a platform called 'ava' and Specialisterne.<sup>63</sup> 'ava' (online since January 2019) is a digital intermediary platform for efficiently providing Personal Assistance for persons with disabilities. Specialisterne is a social enterprise that prepares persons on the autism spectrum for jobs in the IT sector and quality management.

### **Key field: Research and science**

Also, not part of an official strategy<sup>64</sup> but very important as it is the only accessible digital library on disability and inclusion: 'bidok'<sup>65</sup> provides accessible essays, monographs as well as lectures, and is used by more than 150 000 persons each year. In the 2017 report on the situation of persons with disabilities in Austria, 'bidok' is mentioned as best practice example for information dissemination.<sup>66</sup>

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<sup>62</sup> See Bundesministerium für Arbeit, Soziales, Gesundheit und Konsumentenschutz (2019), p. 28.

<sup>63</sup> See Bundesministerium für Arbeit, Soziales, Gesundheit und Konsumentenschutz (2019), p. 36 ff.

<sup>64</sup> 'bidok', founded and run by researchers with disabilities, is funded by the Sozialministeriumservice and the University of Innsbruck.

<sup>65</sup> See <http://bidok.uibk.ac.at>.

<sup>66</sup> Sozialministerium (2017). Bericht der Bundesregierung über die Lage der Menschen mit Behinderungen in Österreich 2016, in German, p. 157.

## 4 Promoting disability inclusion through funding, education and training

### 4.1 How funding promotes disability-inclusive digitalisation and digital transformation

The new 8-Point-Plan for Digital Learning includes the provision of digital equipment for students in 5<sup>th</sup> and 6<sup>th</sup> grade (secondary I level). A website informs about the aim to create the educational and technical conditions for and to provide students with equal access to digital educations. This includes education in digital competences, the proper use of mobile devices as well as the best use of such devices for better learning opportunities. However, no information on accessibility or other disability related matters is included on the website of the Ministry for Education.<sup>67</sup> It is not clear which regional or federal authority is responsible for making sure that children with disabilities can participate equally in the 8-Point-Plan. Inquiries at the Ministry of Education revealed that this issue had not been considered beforehand and that no particular measures are foreseen to prevent inequalities or discrimination on the grounds of disabilities.<sup>68</sup> In Austria, the funding of disability specific technology for children in the educational sector still depends on the individual initiative of parents or teachers as there is no legal entitlement for such technology. According to the authors' experience it is often necessary to collect donations and ask charities for support to fully finance modern assistive technology. This is also pointed out on the website of LIFEtool which provides links to charities.<sup>69</sup>

Funding for disability related technical, assistive and digital devices is generally considered a difficult issue in Austria that has been criticised by disabled persons' organisations (DPOs) for many years.<sup>70</sup> In 2013 the Monitoring Committee for the UN-CRPD wrote in a report to the UN: 'Access to assisting technologies (AT) in Austria has been severely hampered by the fact that the financing of AT is split between local authorities (Federal Republic of Austria and the federal provinces) on the one hand and the social insurance institutions (pension, health, accident insurance institutions, regional social insurance institutions) on the other hand. The situation is aggravated by the fact that a specific institution often pays the aids required only partly and that, therefore, several bodies have to be contacted. Many persons with disabilities also depend on donations (e.g. from the charity-campaign "Licht ins Dunkel"). Due to lengthy procurement procedures, devices are sometimes not available immediately.'<sup>71</sup> There is no legal entitlement for the funding of assistive devices of any kind. In many cases successful funding depends on the commitment of individual persons who collect money from different bodies and charities.<sup>72</sup>

<sup>67</sup> See <https://digitaleschule.gv.at/digitale-endgerate-fur-schulerinnen-und-schuler/>.

<sup>68</sup> Several personal communications via email and telephone in April and May 2021.

<sup>69</sup> See <https://www.lifetool.at/beraten/was-bieten-wir-an/finanzierungsbegleitung/>.

<sup>70</sup> BMASK (2017) Bericht der Bundesregierung über die Lage der Menschen mit Behinderungen in Österreich 2016, p. 51,

<https://broschuerenservice.sozialministerium.at/Home/Download?publicationId=428>.

<sup>71</sup> Independent Monitoring Committee (2013). Report of the Independent Monitoring Committee for the Implementation of the Convention on the Rights of Persons with Disabilities to the Committee on the Rights of Persons with Disabilities in preparation of the dialogue with Austria in September 2013, p. 20

[https://www.monitoringausschuss.at/download/berichte/MA\\_Report\\_to\\_UN\\_Committee.pdf](https://www.monitoringausschuss.at/download/berichte/MA_Report_to_UN_Committee.pdf).

<sup>72</sup> See Flieger, Petra (2009). ANED country report on the implementation of policies supporting independent living for disabled people, p. 18 <https://www.disability-europe.net/downloads/267-aned-independent-living-report-austria>, see also <https://blog.diakonie.at/wie-ist-das-noch-einmal-genau-mit-den-hilfsmitteln>.

More than 10 years ago the initiative ‘The Right to Communication’ was started which aims at the legal entitlement and funding for assistive communication devices. It is estimated that 63 000 persons do have a communication impairment in Austria who would benefit of an entitlement to the funding of communication devices, but so far, the initiative has not shown any improvement in the legal regulation.<sup>73</sup>

Funding for assistive technology at the workplace is regulated in the Austrian Disability Employment Act. A new publication which provides an overview of the horizontal issue of disability in Austria does not include or use the term ‘digital’, but describes ‘Technical work aids’ as follows: ‘In order to compensate for limitations imposed on efficiency by disabilities, and/or to optimise performance, subsidies are offered for technical aids and for training in their use in existing and newly-created jobs.’<sup>74</sup> This outdated understanding of assistive devices for persons with disabilities reflects a medical and rehabilitation paradigm which is not in line with the UN-CRPD. And although funding is legally foreseen for assistive devices at the workplace, in practice ‘access is not guaranteed’ for everybody, as was stated in the study on digitalisation and inclusion on the labours market of persons with disabilities: ‘Provision seems best for people who develop a disability at work, while people with disabilities seeking employment struggle more frequently. Several interviewees additionally noted that assistive technology is prohibitively expensive for many people with disabilities. This is especially problematic for job seekers in certain federal states.’<sup>75</sup> This confirms the finding from above that funding of up-to-date assistive devices is particularly difficult for children and young people with disabilities.

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

Disability and accessibility matters are generally not compulsory in the training of any kind of professionals including web/app designers.<sup>76</sup> However, at the University of Applied Sciences Technikum Vienna there is a bachelor programme for Smart Homes and Assistive Technologies,<sup>77</sup> which focuses on the utilisation of modern electronics and information and communication technology in order to help people. Students get a well-founded, holistic, and interdisciplinary education geared towards the development and implementation of needs-oriented solutions in order to improve the quality of life in people’s immediate (living) environment.<sup>78</sup> There is also a master programme for Healthcare and Rehabilitation Technology which focuses on

<sup>73</sup> See <https://blog.diakonie.at/tagging/recht-auf-kommunikation>.

<sup>74</sup> BMSGPK (2021) Overview of the horizontal issue of disability in Austria, p. 22. <https://broschuere.service.sozialministerium.at/Home/Download?publicationId=441>.

<sup>75</sup> BMASGK (2018) Final Report - The impact of digitalisation on labour market inclusion of people with disabilities. Lessons from two case studies on Austria and platform work (in English), p. 28. <https://www.sozialministerium.at/dam/jcr:aa76c330-38bc-47de-a4fc-c5db46e30bc7/Final%20Report%20-%20The%20impact%20of%20digitalisation%20on%20labour%20market%20inclusion%20of%20people%20with%20disabilities.pdf>.

<sup>76</sup> See [https://www.disability-europe.net/dotcom/?l%5B%5D=6&t%5B%5D=49&t%5B%5D=50&t%5B%5D=51&t%5B%5D=52&view\\_type=list](https://www.disability-europe.net/dotcom/?l%5B%5D=6&t%5B%5D=49&t%5B%5D=50&t%5B%5D=51&t%5B%5D=52&view_type=list).

<sup>77</sup> See [https://www.disability-europe.net/dotcom/?l%5B%5D=6&t%5B%5D=49&view\\_type=list](https://www.disability-europe.net/dotcom/?l%5B%5D=6&t%5B%5D=49&view_type=list).

<sup>78</sup> See website with comprehensive information in English: [https://www.technikum-wien.at/en/study\\_programs/bachelor\\_s/smart\\_homes\\_and\\_assistive\\_technologies/](https://www.technikum-wien.at/en/study_programs/bachelor_s/smart_homes_and_assistive_technologies/).

rehabilitation technology, health telematics, and the implementation and distribution of technology in the field of healthcare and rehabilitation.<sup>79</sup>

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

Bachelor and master-programmes are developed individually by each University or College in Austria. By way of example, the curricula for the respective programmes for teacher training in Western Austria were examined. Bachelor's degree programme for secondary school teachers 'Specialisation Inclusive Education (focus disability)' does not include the term 'digital'. In a more general sense, the following references can be found:

- possibilities to use assistive technologies like computer aided communication, visual communication-, information- and learning aids as well as the use of web-based learning programmes;
- basic knowledge on assistive technologies.<sup>80</sup>

The master-programme for secondary school teachers 'Specialisation Inclusive Education (focus disability)' does not include the term 'digital', but one of the following courses needs to be completed (2,5 ECTS-AP):

- Assistive technology: German Sign Language;
- Assistive technology: Assisted communication;
- Assistive technology: media assisted technology.<sup>81</sup>

Austrian standards<sup>82</sup> carries out courses for authorised experts on accessibility for the built environment. Matters regarding digitalisation, e.g., smart homes and assistive technology, are mentioned only superficially in these courses.<sup>83</sup>

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

As already described in chapter 2.2 basic digital education is not included in curricula of special schools. The curriculum for general special schools does not include the term 'digital' but includes the possibility of non-compulsory lessons for computer application.<sup>84</sup> The curriculum for special schools for children with severe disabilities does not include the term 'digital' either, nor does it include lessons for computer application. The preparation to use ICT is considered a general educational principle

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<sup>79</sup> See website in English: [https://www.technikum-wien.at/en/study\\_programs/master\\_s/healthcare\\_and\\_rehabilitation\\_technology/](https://www.technikum-wien.at/en/study_programs/master_s/healthcare_and_rehabilitation_technology/).

<sup>80</sup> Bachelorstudium Lehramt Sekundarstufe, p. 282, [https://www.uibk.ac.at/fakultaeten-servicestelle/pruefungsreferate/gesamtfassung/ba-lehramt-sekundarstufe\\_stand-01.10.2019.pdf](https://www.uibk.ac.at/fakultaeten-servicestelle/pruefungsreferate/gesamtfassung/ba-lehramt-sekundarstufe_stand-01.10.2019.pdf).

<sup>81</sup> Masterstudium Lehramt Sekundarstufe (Allgemeinbildung): Spezialisierung Inklusive Pädagogik (Fokus Behinderung), p. 111, [https://www.uibk.ac.at/fakultaeten-servicestelle/pruefungsreferate/gesamtfassung/ma-lehramt-sekundarstufe\\_stand-01.10.2019.pdf.%20](https://www.uibk.ac.at/fakultaeten-servicestelle/pruefungsreferate/gesamtfassung/ma-lehramt-sekundarstufe_stand-01.10.2019.pdf.%20).

<sup>82</sup> See website in English: <https://www.austrian-standards.at/en>.

<sup>83</sup> Personal communication with the responsible person for the course on 23 April 2021.

<sup>84</sup> See Lehrplan Allgemeine Sonderschule, [https://www.ris.bka.gv.at/Dokumente/BgblAuth/BGBLA\\_2008\\_II\\_137/COO\\_2026\\_100\\_2\\_440355.html](https://www.ris.bka.gv.at/Dokumente/BgblAuth/BGBLA_2008_II_137/COO_2026_100_2_440355.html).

with a focus on the last two years of compulsory education (8<sup>th</sup> and 9<sup>th</sup> grade) which are meant to prepare young people with disabilities for work. Using computers for children with severe disabilities is considered to bring about chances and opportunities for education (computer assisted teaching) and as a prosthetic or therapeutic device. Basic education in information-technology is considered a preparation for the field of labour.<sup>85</sup>

In an exploratory study on the impact of digitalisation on the vocational inclusion of persons with disabilities, experts emphasized that 'many Austrians with disabilities, especially those middle aged or older, lack digital training and basic computer literacy. Programmes to address this shortcoming are growing more strategically important in Austria.'<sup>86</sup> The interviewees pointed out, that the most emphasis is on persons with reduced mobility who receive the most support to gain digital competences. According to the experts' opinion not enough attention is paid towards the digital training and education of persons with psychosocial or cognitive disabilities. The failure to include compulsory basic digital education in the curricula for students with disabilities and / or special educational needs thus reinforces the digital divide between young persons with and without disabilities.

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<sup>85</sup> See Lehrplan der Sonderschule für schwerstbehinderte Kinder, p. 2644, [https://www.ris.bka.gv.at/Dokumente/BgblPdf/1996\\_355\\_0/1996\\_355\\_0.pdf](https://www.ris.bka.gv.at/Dokumente/BgblPdf/1996_355_0/1996_355_0.pdf).

<sup>86</sup> BMASGK (2018). Final Report - The impact of digitalisation on labour market inclusion of people with disabilities. Lessons from two case studies on Austria and platform work (in English). p 24f. <https://www.sozialministerium.at/dam/jcr:aa76c330-38bc-47de-a4fc-c5db46e30bc7/Final%20Report%20-%20The%20impact%20of%20digitalisation%20on%20labour%20market%20inclusion%20of%20people%20with%20disabilities.pdf>.

## 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

For the Austrian Disability Council (Österreichischer Behindertenrat, the umbrella organisation of a large number of Austrian DPOs) the most significant opportunities presented by digitalisation and digital transformation for persons with disabilities rely on e-inclusion and hence, on the possibility for all to participate in current times.<sup>87</sup> Acknowledging the importance of digitalisation, the Austrian Disability Council will host their annual conference in September 2021 on persons with disabilities in the digital world.<sup>88</sup>

Good examples for the manifold opportunities for persons with disabilities can be seen in the field of communication technologies. If equipped with modern technology and provided with training and support to use it as fully as possible, people with disabilities of all ages can participate fully and equally in education and all other fields of life. This is of course also a precondition for true independent living as defined in the UN CRPD. Examples of such communication technologies can be found on the website of LIFEtool.<sup>89</sup> If children with disabilities are well equipped, trained and supported, they can participate equally and successfully.

LIFEtool is a non-profit organisation that aims at providing persons with disabilities of all ages with assistive technology, particularly for communication.<sup>90</sup> LIFEtool not only provides counselling, training<sup>91</sup> and support to get funding for high quality assistive and digital devices, but is also carrying out projects in research and development.<sup>92</sup> Counselling centres and teams in 5 regions make sure that the services of LIFEtool are available all over Austria.

Another positive example is measure 106<sup>93</sup> of the National Action Plan (NAP) Disability 2012-2020, supporting the market launch of electronic networks and services that in turn, promote Independent Living. The time span to be implemented is 2007-2013. According to the interim evaluation of the NAP Disability, this measure has already

<sup>87</sup> Österreichischer Behindertenrat (2020). Nachhaltige Entwicklung muss inklusiv und partizipativ angegangen werden! Presseausendung, in German.  
<https://www.behindertenrat.at/2020/07/nachhaltige-entwicklung-muss-inklusiv-und-partizipativ-angegangen-werden/>.

<sup>88</sup> See <https://www.behindertenrat.at/termin/save-the-date-ki-und-digitalisierung/> - Unfortunately, the conference date is after the deadline for formulating the text for the new National Action Plan Disability. Hence, ideas formulated and developed in the course of this conference will not be included in the new action plan.

<sup>89</sup> See website in English: <https://www.lifetool.at/en/assistive-technology/source-of-supply/>; see also LIFETool's research and development website: <https://www.lifetool.at/en/research-development/rd-projects/current-projects/>.

<sup>90</sup> See website in English: <https://www.lifetool.at/en/home/>.

<sup>91</sup> See website in English: <https://www.lifetool.at/en/counseling/assistive-technology-centers/>.

<sup>92</sup> See website in English: <https://www.lifetool.at/en/research-development/rd-projects/current-projects/>.

<sup>93</sup> See Ministry of Social Affairs (2016), p. 55.

been implemented.<sup>94</sup> Good opportunities can also be seen in the field of assistive technologies for living independently in your own home.<sup>95</sup>

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

Unfortunately, evidence cannot be provided with regard to the impact of the digital divide on persons with disabilities, as disability (see chapter 2.1) is not referred to as a relevant category of persons affected by the digital divide in Austria: Education, age and gender are mentioned in the context of Digital Austria (see chapter 2.1), but e.g. not income or disability.

Neither overall strategies on digitalisation in Austria nor disability-specific strategies such as the National Action Plan Disability refer to the impact and potential of digitalisation and digital transformation on persons with disabilities to a reasonable extent. Digitalisation still needs to be comprehensively included and discussed in Austria's disability policy. Specific and effective measures to reduce or prevent the digital divide between persons with and without disabilities would then need to be developed, financed and implemented.

Resulting from not or insufficiently including disability as a relevant category for developing strategies, policies, and measures for preparing Austrian citizens for developments in the context of digitalisation, the challenges of digitalisation can be pointedly formulated the following way: Digitalisation and digital transformation will be much more a problem for persons with disabilities in the future, when persons without disabilities will be educated and trained regarding new technologies, but persons with disabilities will be left out of this education and training. This will increase the already existing digital divide between persons with and without disabilities in Austria.

Funding for up-to-date technical and assistive equipment remains a major challenge for persons with disabilities in Austria. The lack of a legal entitlement (see chapter 4.1) for the funding of disability-specific technology for large groups of persons with disabilities leads to profound disadvantages in the course of their lifetimes. Particularly children and all persons with disabilities who are away from the labour market are adversely affected. It depends on the commitment of individual persons and private initiatives to supply children and people with disabilities out of the labour-market with modern technology. This is reinforced by the fact that digital education is not included in curricula for students with special educational needs. Thus, although there is well established expertise of providing persons with disabilities of all ages with individualised technology for all fields of life, it depends on individual initiatives of persons with disabilities, their relatives and professionals involved to collect funding for technical equipment and the training to use it. Austria does not seem to consider persons with disabilities as a distinct and important target group of digitalisation.

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<sup>94</sup> Sozialministerium (2015). Nationaler Aktionsplan Behinderung Zwischenbilanz 2012-2015 (in German) <https://broschuerenservice.sozialministerium.at/Home/Download?publicationId=362>.

<sup>95</sup> See bachelor programme on smart homes and assistive technologies, [https://www.technikum-wien.at/en/study\\_programs/bachelor\\_s/smart\\_homes\\_and\\_assistive\\_technologies/](https://www.technikum-wien.at/en/study_programs/bachelor_s/smart_homes_and_assistive_technologies/).

## 6 Conclusions and recommendations

### 6.1 Conclusions

Austrian digitalisation strategies and action plans mention the impact of digitalisation and digital transformation on persons with disabilities only rarely (see chapter 2.1). In the National Action Disability 2012-2020, digitalisation and digital transformation are superficially mentioned in the context of accessibility and education (see chapter 3.1), but also hardly addressed at all. It appears as if persons with disabilities are more or less left out in the socio-political debates about the impact of new technologies and of digitalisation. Disability inclusiveness is clearly not perceived and addressed as an important way of narrowing the digital divide.

In the key field of education, the specific support needs of students with disabilities are systematically left out of programmes for digitalisation. In 2018, comprehensive lessons on basic digital education were not included in curricula for students with disabilities. Funding for assistive technologies for students with disabilities and persons with disabilities outside the labour market remains a private responsibility of parents and supporters.

### 6.2 Recommendations

New technologies, digitalisation and digital transformation should be prominently addressed (opportunities, risks, challenges and effective measures to overcome the existing digital divide) in the new National Action Plan Disability 2022-2030<sup>96</sup> <sup>97</sup> and also in overall future strategies on digitalisation in Austria.

E-inclusion to bridge the digital divide and gap must not be used as a mere buzzword but governmental measures on the federal level and on the Laender level need to be formulated to be able to implement this concept and to facilitate participation for all.<sup>98</sup>

Compulsory basic digital education needs to be included in curricula for special schools. It must not be possible any longer that children and young people are completely excluded from up-to-date digital education.

Accessibility and disability issues must be included as compulsory issues in the bachelor and master programmes for technical, medical and social professionals to make sure that disability is positioned as a horizontal issue.

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<sup>96</sup> For the new NAP Disability 2022-2030, in spring 2021, a working group on digitalisation and artificial intelligence formulated the text for the new action plan. See Österreichischer Behindertenrat (2020). NAP Arbeitsgruppen des Österreichischen Behindertenrats, in German, <https://www.behindertenrat.at/2020/01/nap-arbeitsgruppen-des-oesterreichischen-behindertenrats/>. See also Österreichischer Behindertenrat (2021). NAP Digitalisierung und KI, in German. <https://www.behindertenrat.at/2021/04/nap-digitalisierung-und-ki/> where 'digital literacy' and 'digital empowerment' of/for persons with disabilities is addressed.

<sup>97</sup> NAP Behinderung 2021-2030: Digitalisierung und KI. Vorschläge für den Bereich Digitalisierung und KI. In German. <https://www.behindertenrat.at/wp-content/uploads/2021/05/NAP-AG-Digitalisierung-und-KI.pdf>; See also Österreichischer Behindertenrat (2021). NAP Digitalisierung und KI, in German: <https://www.behindertenrat.at/2021/04/nap-digitalisierung-und-ki/>.

<sup>98</sup> See e.g. Österreichischer Behindertenrat (2020). Nachhaltige Entwicklung muss inklusiv und partizipativ angegangen werden! Presseausendung, in German <https://www.behindertenrat.at/2020/07/nachhaltige-entwicklung-muss-inklusiv-und-partizipativ-angegangen-werden/>.

Legal entitlement must be ensured by policymakers on the federal level and on the Laender level for necessary assistive technology, particularly in the field of education. It must not be possible any longer that children and young people with disabilities depend on charity for the funding technical equipment that they need for education. Furthermore, the responsibility and competence for children with disabilities must be clarified among the educational authorities on all levels.

Training of teachers should include a more profound and distinct focus on digitalisation for all children, including those with disabilities and special educational needs.

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