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Annual report of the United Nations High Commissioner for Human Rights and reports of the Office of the High Commissioner and the Secretary-General

Promotion and protection of all human rights, civil
political, economic, social and cultural rights,
including the right to development

Rights of persons with disabilities and digital technologies and devices, including assistive technologies

Report of the Office of the United Nations High Commissioner for Human Rights

Summary

The present report, submitted pursuant to Human Rights Council resolution 55/8, contains an examination of the rights of persons with disabilities and digital technologies and devices, including assistive technologies.

The report expands upon the previous reports mandated by the Human Rights Council in its resolution 49/12, and goes into more detail on digital technologies and assistive technologies as elements of care and support for persons with disabilities, which were discussed in the report of the Office of the United Nations High Commissioner for Human Rights (OHCHR) on good practices of support systems enabling community inclusion of persons with disabilities.^a The report also complements the thematic study on the human rights dimension of care and support prepared by the United Nations High Commissioner for Human Rights pursuant to Human Rights Council resolution 54/6.

^a [A/HRC/55/34](#).



I. Mandate and scope

1. In its resolution 55/8, the Human Rights Council requested the Office of the United Nations High Commissioner for Human Rights (OHCHR) to prepare a thematic study on the rights of persons with disabilities and digital technologies and devices, including assistive technologies. The present report builds on the Office's previous thematic studies on support and care systems for persons with disabilities.¹

2. The present report is informed by 59 contributions from Member States and other relevant stakeholders, including regional organizations, civil society organizations, organizations of persons with disabilities and national human rights institutions, all of which are to be made available online.²

3. In the present report, OHCHR reiterates the importance of adopting a disability rights-based approach to care and support systems that recognizes the relevance of digital technologies and assistive technologies.³ A summary and compilation of international human rights standards, with an specific focus on the Convention on the Rights of Persons with Disabilities, are presented in section II; the main challenges and good practices in relation to digital technologies across the dimensions of e-governance, access to information, accessibility tools and assistive devices are illustrated in section III; reflections on the importance of digital and assistive technologies in care and support systems are provided in section IV; and recommendations to States and other stakeholders are presented in section V.

II. Digital and assistive technologies in the international human rights system

A. Digital technologies through a human rights lens

4. Information and communications technologies, or digital technologies, refer to a broad range of hardware and software solutions, encompassing devices, applications and platforms used to transmit, store, create and exchange information and data.⁴ Digital technologies overlap with assistive technologies when they provide accessibility tools.

5. Digital technologies have transformed States, communities, businesses and households. While they can improve service delivery and increase efficiency, risks to human rights persist, such as risks to the rights to privacy and non-discrimination and risks of inequality of access and use, including gender-based violence and inequalities.⁵

6. Marginalized groups face the greatest risk of exclusion when return on investment is prioritized over the obligation to uphold human rights, undermining their dignity and inclusion. Addressing the negative impact and ensuring that all groups in society, including persons with disabilities, equitably share the benefits of digital technology, is crucial as technologies evolve.⁶

7. Anchoring the development, use and regulation of digital technologies in the international human rights framework is necessary to prevent the exclusion of marginalized groups. The implementation of legal frameworks rooted in human rights bridges the digital divide by holding Governments and corporations accountable for transparency and fairness,

¹ A/HRC/55/34 and A/HRC/52/52.

² See <https://www.ohchr.org/en/calls-for-input/2024/call-inputs-human-rights-council-resolution-558-rights-persons-disabilities>.

³ A/HRC/55/34, paras. 21, 22, 41 and 42.

⁴ Based on the definition of the United Nations Educational, Scientific and Cultural Organization (UNESCO) Institute for Statistics (see <https://uis.unesco.org/en/glossary-term/information-and-communication-technologies-ict>).

⁵ UNESCO, "Women for ethical AI: outlook study on artificial intelligence and gender", paper prepared for discussion at Women 4 Ethical Artificial Intelligence Conference, Paris, 30 October 2024, p. 7.

⁶ Global Digital Compact, para. 3.

fostering an ethical and inclusive digital landscape for all, including affirmative action when needed.⁷

8. Digital technologies affect civil, political, economic, social and cultural rights, with human rights bodies increasingly addressing their implications. Although most human rights treaties do not contain explicit references to digital technologies, the Human Rights Council and human rights bodies have made clear the application of human rights law to the digital sphere.⁸

9. Under the Guiding Principles on Business and Human Rights, digital technology businesses must respect human rights by identifying, addressing and mitigating risks. This involves human rights due diligence, transparent data practices, accessibility and non-discriminatory design, particularly for persons with disabilities, to ensure that innovations uphold privacy, equality and dignity. The International Labour Organization includes solidarity and the social economy in its definition of the care and support sector.⁹

10. The right to privacy involves specific concerns for persons with disabilities. Increased data collection, especially sensitive information, multiplies risks of discrimination, unauthorized disclosure and data misuse. States must implement data protection measures ensuring the secure handling of personal data, including ensuring transparency, limiting data collection to specified legitimate purposes and establishing security measures against unauthorized access. Big data and artificial intelligence introduce new threats due to biased data sets and discriminatory algorithms.¹⁰

11. The right to live free from exploitation, violence and abuse is of specific concern in digital environments. In combination with the right to privacy, specific measures are needed to prevent cyberbullying.¹¹

Independent United Nations human rights mechanisms, disability and digital technologies

12. The Convention on the Rights of Persons with Disabilities includes references to information and communications technologies, new technologies and the Internet. Article 2 of the Convention defines communication, article 4 obliges States parties to undertake or promote research on and access to new technologies, and article 9 obliges States parties to promote the accessibility of information and communications technologies from the design stage. Under article 21, States parties must ensure equal freedom of expression, including by urging private entities to provide accessible online services, and, under article 29, States parties must facilitate the use of new technologies for political participation. International cooperation on the sharing of and access to accessible and assistive technologies is covered in article 32.

13. The Committee on the Rights of Persons with Disabilities considers digital technologies as: (a) an e-governance resource;¹² (b) an access-to-information tool;¹³ and (c) an accessibility tool, in the form of assistive products.¹⁴ The Committee has considered them in connection with the rights to accessibility, access to information, education, social protection, privacy, health and live independently in the community, statistics and data collection, access to justice, awareness-raising and situations of risk and humanitarian emergencies.

⁷ Ibid., paras. 22, 23 and 25.

⁸ Human Rights Council resolution 20/8.

⁹ Resolution concerning decent work and the care economy, adopted by the International Labour Conference at its 112th session (2024), paras. 9–14.

¹⁰ See [A/HRC/49/60](#).

¹¹ See [A/HRC/56/31](#).

¹² General comment No. 2 (2014), para. 22; general comment No. 7 (2018), para. 54; [CRPD/C/5](#), para. 136; and [CRPD/C/AZE/CO/2-3](#), para. 7.

¹³ General comment No. 2 (2014), paras. 21 and 38; and [CRPD/C/BHR/CO/1-2](#), para. 19.

¹⁴ General comment No. 4 (2016), para. 23; general comment No. 5 (2017), para. 39; and [CRPD/C/ZMB/CO/1](#), para. 48.

14. In relation to persons with disabilities, other treaty bodies have considered digital technologies in connection with, inter alia, digital inclusion; the equitability and affordability of online services connectivity; digital education; combating stereotypes; and access to scientific progress.¹⁵ Moreover, the special procedures of the Human Rights Council have considered digital technologies and disability in relation to, inter alia, barriers to accessing social protection benefits, privacy and access to services.¹⁶ On the other hand, limited attention has been paid to the issue as part of the universal periodic review.¹⁷

15. The Special Rapporteur on extreme poverty and human rights has raised concerns about privacy, discrimination and inequality with regard to the digital welfare state, urging States to regulate technologies in line with human rights principles to ensure transparency, accountability and protection for vulnerable populations.¹⁸

16. The Special Rapporteur on the rights of persons with disabilities has identified the potential of artificial intelligence to improve accessibility, independence and personalized support, including in education, employment and healthcare. However, he has warned of risks such as exclusion, discrimination and privacy violations, stressing that artificial intelligence systems often overlook the specific needs of persons with disabilities, exacerbating inequalities.¹⁹

B. Assistive technologies and the rights of persons with disabilities

17. “Assistive technologies” refers to the application of knowledge and skills by means of digital and non-digital assistive products, systems and services aimed at supporting individuals with functional limitations to improve their independence and well-being. Assistive products include any external product whose primary purpose is to maintain or improve an individual’s functioning and independence.²⁰

18. Assistive technologies are explicitly mentioned in the Convention on the Rights of Persons with Disabilities. Article 4 outlines the general obligation of States parties to conduct research on and promote the availability of assistive technologies. Article 20 is focused on ensuring personal mobility for persons with disabilities, including through access to assistive technologies, and emphasizes the need to address the diverse needs of persons with disabilities. It is also set out in the Convention that States parties must promote assistive technologies as they relate to rehabilitation (art. 26) and facilitate their use to enable participation in public and political life (art. 29). Article 32 encourages international cooperation to enhance access to assistive technologies globally.

19. The Committee on the Rights of Persons with Disabilities has considered assistive technologies in relation to on children with disabilities, situations of risk and humanitarian emergencies access to justice, living independently and being included in the community, access to information, education and health.²¹ The Committee on the Rights of the Child and the Independent Expert on the enjoyment of all human rights by older persons have considered assistive technologies in relation to education and robotic support for older persons.²²

20. The Committee on the Rights of Persons with Disabilities and other stakeholders have raised concerns in relation to digital technologies and devices in the following areas:

¹⁵ CRC/C/BTN/CO/6-7, para. 22; CEDAW/C/MYS/CO/6, para. 37; CEDAW/C/ITA/CO/8, para. 25; E/C.12/SWE/CO/7, para. 40; and E/C.12/AZE/CO/4, para. 58.

¹⁶ A/HRC/37/56/Add.2, para. 57; A/HRC/41/39/Add.1, para. 60; A/HRC/52/32/Add.2, para. 107 (c); and A/HRC/55/46/Add.1, para. 90.

¹⁷ For exceptions, see A/HRC/38/12, para. 96.132; and A/HRC/39/16, para. 24.334.

¹⁸ See A/74/493.

¹⁹ See A/HRC/49/52.

²⁰ World Health Organization (WHO), document A71/21, p. 1.

²¹ CRPD/C/PER/CO/2-3, para. 14; CRPD/C/ISR/CO/1, para. 24; CRPD/C/SAU/CO/1, para. 24; CRPD/C/HUN/CO/2-3, para. 43; CRPD/C/NOR/CO/1, para. 33; CRPD/C/VEN/CO/1, para. 43; and CRPD/C/ALB/CO/1, para. 42. See also Committee on the Rights of the Child, general comment No. 25 (2021), paras. 89–92.

²² CRC/C/ISL/CO/5-6, para. 38; and see A/HRC/36/48.

(a) access;²³ (b) affordability;²⁴ (c) training and capacity-building;²⁵ (d) awareness-raising and education;²⁶ (e) integration into public services;²⁷ and (f) international cooperation.²⁸ The present report will be focused on these areas.

III. Digital and assistive technologies in policy

A. E-governance and digital inclusion: bridging gaps for persons with disabilities

21. The strength of digital infrastructure – comprising reliable electricity, mobile and fixed broadband coverage and e-governance platforms – and the digital maturity of government structures, defined as their ability to implement, manage and utilize advanced digital technologies,²⁹ are key factors enabling effective policies for persons with disabilities. Examples are presented in the present report.

22. Public entities should provide a policy environment, funding and access to digital technology through public platforms, including healthcare and social programmes. The private sector contributes through innovation, development, service provision and product distribution. Collaboration among sectors is critical in ensuring that quality, affordable and innovative solutions reach the people in underserved and remote areas who need them.³⁰

23. Well-designed e-governance, widely understood as the use of digital technology to connect government systems internally and externally, with businesses and the public, contributes to good governance. E-governance can enhance access to services, improve the efficiency and effectiveness of service delivery and foster interactive governance, bringing government closer to the people.

24. E-governance has faced criticism regarding risks to the right to privacy and data-processing practices that can lead to discrimination and exclusion. Moreover, the design of e-governance systems can create barriers through complex or inaccessible user interfaces.

25. E-governance can work as a good governance tool, but it should not be seen as a solution to all administrative challenges. E-governance and digital services should be adapted to the needs and realities of the people they serve; they should not be seen as a replacement for human interaction.³¹

26. To meet human rights obligations and increase access for underserved populations, including persons with disabilities in rural areas, telecommunications service providers could be required to contribute to universal service funds, where applicable, or establish alternative mechanisms, such as universal coverage in licensing agreements, to finance digital infrastructure. Grenada, Jamaica, Saint Lucia, and Trinidad and Tobago, use universal service funds to supply connectivity and devices to persons with disabilities.³²

²³ CRPD/C/MNG/CO/2-3, para. 42.

²⁴ CRPD/C/ZMB/CO/1, para. 40.

²⁵ CRPD/C/BGD/CO/1, para. 42.

²⁶ CRPD/C/MWI/CO/1-2, para. 41.

²⁷ CRPD/C/ALB/CO/1, para. 42.

²⁸ CRPD/C/MNG/CO/2-3, para. 42.

²⁹ Organisation for Economic Co-operation and Development (OECD), *The E-Leaders Handbook on the Governance of Digital Government*, OECD Digital Government Studies (Paris, 2021).

³⁰ Global Digital Compact, para. 11.

³¹ *E-Government Survey 2024* (United Nations publication, 2024), p. 127.

³² Alliance for Affordable Internet and Internet Society, *Universal Service and Access Funds in Latin America and the Caribbean* (Washington, D.C., 2021), p. 4.

1. Human rights-based approach to e-governance

Participation

27. States engage persons with disabilities in digital consultations more than other groups, but evidence of the impact of such consultations is limited.³³ Co-design, co-creation and co-production of e-services are effective anti-discrimination measures, yet few States report such activities: 42 States have reported co-creation in education e-services and only 22 States have reported co-creation in justice e-services.³⁴ Examples of co-creation include multi-stakeholder forums in South Africa that involve disability representatives to ensure inclusive policies and standards³⁵ and the Pacific Digital Democracy Initiative in Tonga and Solomon Islands, which engaged persons with disabilities in developing strategies for digital transformation.³⁶

28. E-voting can make the voting process easier.³⁷ In Estonia, the Government gives the option of Internet voting, in addition to paper ballots.³⁸ In Pakistan, the Special Talent Exchange Program, a disability rights organization, developed a mobile application to connect persons with disabilities with information on disability rights.³⁹

29. Although e-governance has shown significant improvements in participation by persons with disabilities, much remains to be done. Web accessibility is a core priority as a fundamental interface in e-governance. It has been estimated that fewer than 2 per cent of the 1.9 billion existing websites are fully accessible to persons with disabilities.⁴⁰ The Government of Chile has initiated the National Universal Accessibility Plan (2022–2032) to set accessibility standards for public services information and communication, proposing annual requests for compliance reports.

Accountability

30. Accountability of e-governance systems is crucial in the areas of data-handling and the design of inclusive digital services. Digital government services should be transparent, secure and responsive to the public. States should manage data responsibly, focusing on protecting privacy and cybersecurity. Moreover, inclusive participation plays a vital role in enhancing accountability. The Data Protection Act, No. 24 of 2019, of Kenya ensures that individuals can challenge decisions made solely through automated processing, promoting transparency and protecting their rights (sect. 35).

31. E-governance also operates as an accountability tool. Publishing procurement data and digitalizing justice procedures increase the capacity of citizens to monitor performance. The Validity Foundation identified specific applications of technologies related to the rights of persons with disabilities that increased accountability within the justice system: (a) digital case-management systems; (b) digital case files; (c) remote hearings and video conferencing; and (d) remote support.⁴¹

³³ *E-Government Survey 2024*, p. 60.

³⁴ *Ibid.*, p. 143.

³⁵ GSMA, *Driving the Digital Inclusion of Persons with Disabilities: Policy Considerations for Low- and Middle-Income Countries* (2022), p. 26.

³⁶ United Nations Development Programme (UNDP), “Pacific Digital Democracy Initiative (PDDI): progress report – March 2024”.

³⁷ Sandra Obradovic, Giulia Gentile and Michael Bruter, “Study on participation of citizens with disabilities in elections” (Brussels, European Union, 2023), p. 20.

³⁸ Mart Susi, “The right to political participation of persons with disabilities ahead of the 2024 European Parliament elections: Estonia”, paper prepared for the European Union Agency for Fundamental Rights, Tallinn, January 2024, available at https://fra.europa.eu/sites/default/files/fra_uploads/ee-political-participation-2024_en.docx.docx.

³⁹ Rachel Arnold, “Five principles for using technology to support election access and inclusion” (Arlington, Virginia, International Foundation for Electoral Systems, 2023).

⁴⁰ *E-Government Survey 2022* (United Nations publication, 2022), p. 146.

⁴¹ See <https://www.ohchr.org/en/calls-for-input/2024/call-input-application-digital-technologies-administration-justice-report>.

Non-discrimination

32. Preventing discrimination and mitigating bias in e-governance systems for persons with disabilities require prioritizing accessibility in design and decision-making processes. Strong transparency protocols and robust anti-discrimination measures are essential to ensure fair treatment and prevent exclusion.

33. Mobile phones remain the primary way for most people to access the Internet in low- and middle-income countries;⁴² however, older adults, women and persons with disabilities are disproportionately excluded from digital and mobile services, particularly in the global South. Fewer women with disabilities own mobile phones or use the Internet compared with men with disabilities. In Uganda, only 5 per cent of women with disabilities reported using mobile Internet compared with 9 per cent of men with disabilities, and only 41 per cent owned a mobile phone, compared with 71 per cent of men with disabilities.⁴³

34. Robust regulation is essential to preventing discrimination, including mandatory compliance with Web Content Accessibility Guidelines 2.2, video relay services, targeted accessibility measures and inclusive design involving users. In Brazil, accessibility is required for business and government websites⁴⁴ and there are ongoing efforts to implement the Web Content Accessibility Guidelines 2.2 guidelines.

35. Moreover, e-governance tools help combat discrimination by simplifying access to services and reducing barriers for persons with disabilities. In Bangladesh, mobile banking improves access to disability allowance payments.⁴⁵ The Accessible India Campaign allows users to report accessibility issues using a mobile application.⁴⁶ Cybersecurity in banking increasingly uses face recognition, a practice that needs to ensure the inclusion of people with facial disfigurement.

Empowerment

36. Access to e-services can facilitate administrative tasks for persons with disabilities, leaving more time for self-care activities. E-government platforms help manage services more efficiently, but human support and training are still needed to ensure full engagement. A hybrid approach combining digital tools with assistance bridges accessibility gaps. In Monaco, workshops are provided for local disability organizations on digital device use.⁴⁷

37. Digital communications technologies, paired with assistive technologies, empower persons with disabilities to build communities, advocate for their rights and share experiences. They enhance the ability of persons with disabilities to raise awareness, report injustices and promote social change, giving them a stronger voice in public discourse. In the United Republic of Tanzania, the Digital Advocacy for Youth with Disabilities campaign provides training to young people with disabilities on using social media for advocacy and raising awareness of disability issues.⁴⁸ The Benetech Project and Inclusion International developed an application to support self-advocacy for persons with intellectual disabilities in Kenya.⁴⁹

⁴² International Telecommunication Union and UNESCO, “The state of broadband: digital connectivity – a transformative opportunity” (Geneva, 2023), p. 37.

⁴³ GSMA, “The digital exclusion of women with disabilities: a study of seven low- and middle-income countries” (London, 2020).

⁴⁴ Law for the Inclusion of Persons with Disabilities (Act No. 13,146 of 6 July 2015), art. 63.

⁴⁵ Aspire to Innovate (a2i), “Accelerating G2P payment digitization: lessons from the field” (Dhaka, 2022), p. 4.

⁴⁶ Sugamya Bharat App (see <https://dict.mizoram.gov.in/post/brief-note-on-sugamya-bharat-app-and-access>).

⁴⁷ Monaco Public Service, “Maison du numérique : 1 500 visiteurs en 6 mois d’ouverture”, 21 February 2024, available at <https://monservicepublic.gouv.mc/actualites/maison-du-numerique-1-500-visiteurs-en-6-mois-d-ouverture> (in French); and submission from Monaco.

⁴⁸ See <https://www.youth-disability.org/advocacy-by-young-people-with-disabilities-assessing-the-outcomes-of-campaigns/>.

⁴⁹ Listen Include Respect, Inclusion International and Down Syndrome International, “Projects”, available at <https://www.listenincluderespect.com/projects>.

2. Digital technologies to access information

38. Governments can use digital case-management systems to coordinate services such as healthcare and social services efficiently. Cloud-based solutions enable real-time information-sharing, ensuring faster and more responsive support for persons with disabilities. For example, the Mi Argentina platform offers a digital single disability certificate, allowing individuals to manage disability-related procedures and access health and social services.⁵⁰

39. Digital platforms to collect data on persons with disabilities enable personalized service delivery by storing medical records and assistive device needs. Artificial intelligence and big data tools help analyse trends, predict needs and allocate resources for timely support. In Sweden, the Helsingborg Health and Care Department developed an artificial intelligence tool to identify users at high risk and those with rehabilitation potential, allowing targeted interventions, optimizing resource use and reducing future needs.⁵¹

40. E-governance through Government–citizen initiatives provides fast, targeted access to information by creating a one-stop shop for public services. This simplifies interactions, offering real-time access to services, improving transparency and reducing delays. Digital platforms can enhance communication and civic engagement and make government services more accessible and user-friendly, if a human rights-based approach is applied. Lithuania implemented an online one-stop shop service, enabling individuals to access assistance and facilitating the development of personalized assistance plans.⁵²

41. In regions vulnerable to natural disasters and the effects of climate change, the development of accessible early warning systems and inclusive strategies is essential to save lives. In the Bahamas, the National Commission for Persons with Disabilities has developed the AccessAbility application, providing digital disaster alerts, one-touch emergency services and accessible transportation routes, as well as the location of registered users, allowing national emergency services to better locate and evacuate persons with disabilities during emergencies.⁵³

42. Citizen-to-government e-governance can enhance public participation and transparency in policymaking. Online platforms allow citizens to contribute through polls, surveys and discussions, providing feedback and diverse perspectives. This strengthens collaboration and supports inclusive, data-driven policy development. The public consultation portal of the Ministry of Inclusion, Social Security and Migration of Spain allows persons with disabilities and organizations to contribute to policies, promoting transparency and inclusive policies based on real needs.⁵⁴

43. Citizen-to-citizen interactions using social media can foster community collaboration and engagement when human rights concerns are addressed and integrated. Social media also enables feedback and suggestions, enhancing communication beyond government announcements. The multilingual E-people platform of the Republic of Korea enables citizens to submit proposals and e-petitions and discuss policies online.⁵⁵ In India, SHEROES, a social network specifically for women, including women with disabilities, provides tools, support groups and access to care and support services.⁵⁶

44. The growth of online marketplaces, social media and gig-work platforms creates employment opportunities for persons with disabilities, if these platforms are accessible and

⁵⁰ See <https://www.argentina.gob.ar/servicio/como-obtener-el-certificado-unico-de-discapacidad-cud> (in Spanish).

⁵¹ See <https://essa-eu.org/technology-tool/>.

⁵² OECD, *Personalised Public Services for People in Vulnerable Situations in Lithuania: Towards a More Integrated Approach* (Paris, 2023), p. 35.

⁵³ UNDP, “Mobile app brings unprecedented access and opportunity to persons with disabilities in the Bahamas”, 7 December 2022.

⁵⁴ See <https://expinterweb.inclusion.gob.es/participacion/index.html> (in Spanish).

⁵⁵ Sriani Kring and Sara Elder, “Digital solutions and formalization: e-formalization case study on the Republic of Korea” (Geneva, International Labour Organization (ILO), 2022), p. 19.

⁵⁶ See <https://sheroes.com/>.

user-friendly.⁵⁷ The private sector can reduce inequalities by embracing disability inclusion and offering accessible, affordable products. In South-East Asia, the service company Grab recruits persons with disabilities as drivers, offering specialized training and assisting deaf passengers and drivers with in-application notifications.⁵⁸

3. Digital assistive products

45. The integration of digital technologies within assistive products can transform traditional assistive products into smart devices that can send and receive data, improving understanding about users' behaviours and expanding the capabilities of assistive products. While the affordability of digital assistive products is a crucial concern, their potential cost-saving benefits should not be overlooked, as these products consolidate multiple functionalities into a single digital device. Smart wheelchairs use digital controls such as eye-gaze mobility, artificial intelligence and sensors to avoid obstacles and assist with navigation. Audio and tactile feedback can be integrated into white canes used by blind persons for safer movement. Artificial intelligence-powered virtual assistants, smart home devices and wearable technology such as smart glasses offer real-time assistance, improving daily living and communication. In Israel, a wearable assistive product provides hands-free access to audio health and care information, instantly reading text to the user.⁵⁹

46. The digital ecosystem includes devices, platforms and accessible applications such as SeeingAI, which assists with navigation and object recognition. Smartphones now feature accessibility tools such as text-to-speech and voice dictation, reducing barriers for persons with disabilities. In Chile, the National Service for Persons with Disabilities (SENADIS) collaborates with Lazarillo, an application that supports users who are blind or have low vision through notifications and georeferencing of SENADIS offices.⁶⁰

47. In addition to the cost of high-end smartphones, limited awareness of accessibility features among users with disabilities is a barrier to adopting smartphone-based assistive technologies. Research in Bangladesh and Kenya found that only about 10 per cent of persons with disabilities used such features.⁶¹ The languages available for digital assistive technologies, such as text-to-speech and speech recognition, are often limited, and visual imagery often does not reflect local ethnic diversity and representation.

B. Breaking barriers through assistive technologies

48. Assistive technologies are essential for persons with disabilities as they enable greater independence, participation and quality of life. They are crucial in overcoming barriers to accessibility and inclusion, allowing individuals to engage in education, employment and social activities.

49. Access to assistive technologies supports functional independence, enhances communication and facilitates mobility, thereby reducing the need for external assistance and fostering self-reliance. Those providing unpaid care and support benefit from assistive technologies that enhance functionality and reduce the amount of support needed. In addition, assistive technologies play a pivotal role across the lifespan, supporting early childhood development and educational attainment and maintaining autonomy in ageing.

⁵⁷ Caribou Digital, "Towards more inclusive platform livelihoods: reflections on young Kenyan platform workers and sellers living with disabilities" (Farnham, Surrey, United Kingdom of Great Britain and Northern Ireland, 2023).

⁵⁸ Grab, "Grab for Good: break the silence to empower lives", 5 October 2019, available at <https://www.grab.com/my/blog/driver/grabforgood-break-the-silence-to-empower-lives/>.

⁵⁹ Broadband Commission for Sustainable Development, *The Future of Virtual Health and Care: Driving Access and Equity through Inclusive Policies* (2022), p. 45.

⁶⁰ See <https://lazarillo.app/>.

⁶¹ Clara Aranda Jan and Sophie Pitcher, "More needs to be done to ensure persons with disabilities access and use accessibility features", GSMA, 15 January 2020, available at <https://www.gsma.com/solutions-and-impact/connectivity-for-good/mobile-for-development/blog/more-needs-to-be-done-to-ensure-persons-with-disabilities-access-and-use-accessibility-features/>.

50. The benefits of assistive technologies extend beyond the individual, offering substantial economic and social returns for societies. They reduce healthcare and welfare costs, increase productivity by enabling individuals to join the workforce and mitigate the risk of isolation and exclusion.

51. The lack of assistive technologies for children with disabilities limits household income by increasing unpaid time spent on caregiving.⁶² Investment in the provision of hearing aids, prostheses, eyeglasses and wheelchairs has been estimated to result in a return on investment of 9 to 1.⁶³ However, traditional markets struggle to prioritize investments with broad social and economic value, as their return for shareholders and profit margins may not be considered sufficient.

52. Assistive technologies are vital for addressing the needs of those who acquire impairments due to conflict and disasters or have pre-existing impairments exacerbated by disrupted services. Integrated policies, investment in research and innovation and international cooperation are urgently needed to ensure that these tools are available to those who need them. Gender inequality is also a significant concern: in some countries, men are twice as likely as women to access assistive technologies.⁶⁴

1. Awareness

53. Awareness of benefits and available options remains low among potential users and their family members, healthcare providers, policymakers and the public. This leads to the underutilization of these tools and reduced demand, further limiting market development and investment.

54. Healthcare providers and community health workers often lack knowledge about assistive technologies, which affects their ability to identify needs, make appropriate referrals and support the use of these products. Without widespread understanding of assistive technologies, stigma and misconceptions persist, creating barriers to access and inclusion.

55. Awareness campaigns are vital to close the knowledge gap and highlight the benefits of assistive technologies. Governments should inform persons with disabilities and their families about available options, including funding schemes. Integrating information into health and social programmes can broaden reach and equip healthcare providers with the necessary knowledge. In Singapore, the Enabling Village is home to an assistive technologies centre, promoting awareness and adoption of assistive technology products.⁶⁵

56. Collaborating with disability organizations and advocacy groups can amplify these efforts and help combat stigma and misconceptions. In addition, leveraging digital platforms and social media can extend the reach of awareness-raising campaigns, especially in remote and underserved areas.

2. Affordability and other barriers to access

57. Access to assistive products is hindered by several factors, primarily high costs, limited availability and poor distribution networks. Services are often inaccessible to remote areas.⁶⁶ There is also a shortage of personnel, especially women, trained to fit and maintain devices, along with low awareness among healthcare providers and users. Gender needs are frequently overlooked and inadequate policies, insufficient data, pricing and funding further obstruct access to assistive technologies.⁶⁷

58. Addressing these challenges requires integrated policies that prioritize the inclusion of assistive technologies within education, health and social care and support systems, ensuring that these services are available and affordable to all. Investment in research and

⁶² United Nations Children's Fund (UNICEF), *The State of the World's Children 2013: Children with Disabilities* (New York, 2013).

⁶³ ATscale, *The Case for Investing in Assistive Technology* (2020), p. 7.

⁶⁴ WHO and UNICEF, *Global Report on Assistive Technology* (Geneva, 2022), p. 50.

⁶⁵ See <https://www.sgenable.sg/your-first-stop/community-integration>.

⁶⁶ A/77/139, paras. 30–32 and 59 (b), with regard to persons affected by leprosy.

⁶⁷ WHO and UNICEF, *Global Report on Assistive Technology*.

innovation is crucial to developing affordable, high-quality assistive products that meet the diverse needs of users in different contexts.

59. International cooperation, including South-South cooperation, is also essential, as it can facilitate knowledge-sharing, capacity-building and the development of global standards for the provision of assistive products. Public-private partnerships among Governments, international organizations and the private sector must comply with their human rights obligations, while stimulating innovation and affordability.

60. The high cost of assistive products is driven by inefficiencies, fragmented supply chains, limited local production and high import taxes. Poor logistics and lack of coordination among stakeholders inflate prices and hinder access. In addition, the absence of centralized platforms for product data and pricing complicates procurement, although guidance is available in these areas.⁶⁸

61. States should adopt fiscal policies that foster local production of and access to affordable assistive products. Trade agreements should secure immediate access by means of imports, with measures to support a transition to sustainable domestic manufacturing and equitable global distribution.

62. To address these challenges, it is crucial to establish integrated systems that streamline service delivery and funding across sectors. Bulk purchasing can help reduce costs through economies of scale being passed on to the beneficiaries, while using an evidence-based list of product categories guiding users and providers and ensuring that products meet local needs.⁶⁹ Promoting local production and assembly can also reduce costs and ensure that products are tailored to the specific needs of the population.⁷⁰

63. Transparent pricing models, dedicated budgets and product catalogues can enhance resource allocation and advocacy efforts. Initiatives exist to serve as supply chain solutions, facilitating purchase, warehousing and direct shipment of assistive products from multiple manufacturers to service providers.⁷¹ In another type of initiative, the World Health Organization (WHO) and the United Nations Children's Fund (UNICEF) have collaborated to introduce pre-approved assistive products in their supply catalogues, reducing costs and streamlining procurement processes for States.⁷²

64. In some countries, social protection systems can facilitate access to assistive products through health insurance, subsidies, cash transfers or direct provision.⁷³ In France, hearing aids are covered by social security and complementary health insurance.⁷⁴ However, overall, inequalities in access remain high. For instance, in Africa, only 38 per cent of States subsidize or have in place a government financing or insurance scheme that covers assistive products.⁷⁵ Affordability also depends on indirect costs, such as travel to obtain or maintain products. In Tajikistan, the Government covers transport, accommodation and meals for persons with disabilities if travel is required to obtain assistive products.⁷⁶

65. Comprehensive policies and regulatory support are needed to increase integration in health and social systems and combat stigma. Lack of integration into universal health coverage and social systems results in inconsistent service delivery and limited access. Stigma and the absence of inclusive environments discourage the use of assistive technologies and perpetuates social and economic exclusion for those who need them most.

⁶⁸ Clinton Health Access Initiative and ATscale, *Assistive Products Market Report 2024* (2024).

⁶⁹ WHO, *Assistive Product Specifications and How to Use Them* (Geneva, 2021).

⁷⁰ WHO and UNICEF, *Global Report on Assistive Technology*, paras. 53 and 60.

⁷¹ See, for example, <https://www.clasphub.org/>.

⁷² WHO and UNICEF, *A Manual for Public Procurement of Assistive Products, Accessories, Spare Parts and Related Services* (Geneva, 2020).

⁷³ Alexandre Cote, "Social protection and access to assistive technology in low- and middle-income countries", *Assistive Technology*, vol. 33, supplement 1, pp. S102–S108.

⁷⁴ Clinton Health Access Initiative and ATscale, *Assistive Products Market Report 2024*, p. 71.

⁷⁵ WHO, Framework for Improving Access to Assistive Technology in the WHO African Region, document AFR/RC71/11, para. 10.

⁷⁶ WHO Regional Office for Europe, *Assistive Technology in Tajikistan: Situational Analysis* (Copenhagen, 2021).

66. Markets need to be shaped and informed by human rights. Integrated health systems, along with keeping pace with evolving needs and new technologies, can help secure greater access.⁷⁷ In Norway, assistive technology centres reduce costs through public procurement, advise end users and repair and refurbish assistive devices.⁷⁸ Incentives such as tax breaks, subsidies and grants for private companies can stimulate private investment in assistive technologies and foster innovation.

67. Promoting local manufacturing can improve access to affordable, customized assistive products, while reducing production time and costs. In Botswana, low-cost, rechargeable hearing aids have been developed that use solar technology⁷⁹ and, in Nepal, 3D-printing of wheelchair parts proved local production feasible, although more testing is required for manufacturing on a larger scale.⁸⁰

3. Quality

68. The quality of assistive products is key, yet access to high-quality, reliable products is limited. Often, the market is flooded with low-cost, substandard products that do not meet the necessary safety or functionality standards, leading to limited effectiveness and potential harm to users. Products are commonly not tailored to the specific needs of users or the environments in which users live, resulting in reduced usability and shorter product lifespans. In Sierra Leone, women who received lower limb prosthetic or orthotic devices reported fewer functional gains, likely because the design of the devices was based on male anatomy and associated needs.⁸¹

69. Addressing the issue of quality requires coordinated efforts to establish and enforce robust quality standards and regulatory frameworks for assistive technologies. Governments and international organizations should implement comprehensive policies that ensure that all products, including systems and service providers, meet minimum safety and performance criteria before reaching the market, while recognizing the importance of ensuring the affordability of assistive products.⁸²

70. Context-driven local production and research-led innovation can create affordable, high-quality assistive products. Training and certification for service providers enhance product fitting and maintenance quality, ensuring well-fitted devices. Quality assurance and regulatory oversight further secure access to safe and reliable technologies. In India, ALIMCO, a public-sector enterprise upholds international quality standards and collaborates with a German prosthetics manufacturer to co-produce components.⁸³

4. Training

71. Significant challenges exist with regard to the provision of training in assistive technologies, primarily due to the lack of specialized education programmes and the shortage of trained professionals. Many healthcare and rehabilitation practitioners receive little to no formal training, leaving them unprepared to assess, prescribe and support the use of these tools. Training programmes often lack standardized curricula, resulting in inconsistencies in the skills and competencies of service providers.

⁷⁷ United Nations Sustainable Development Group, “Assistive technology can revolutionize development, learning and participation: it’s time children everywhere have access”, 25 July 2024, available at <https://unsdg.un.org/latest/stories/assistive-technology-can-revolutionize-development-learning-and-participation-it%E2%80%99s-time-children-everywhere-have-access>.

⁷⁸ World Bank, “Accelerating the inclusion of persons with disabilities in Uzbekistan’s digital economy” (Washington, D.C., 2024), annex 1, p. 44.

⁷⁹ See <https://deafronics.wordpress.com/>.

⁸⁰ Ram Chandra Thapa, “Enabling access locally: a systems approach to wheelchair provisioning in low-resource contexts (Nepal)”, dissertation, University College London, 2023.

⁸¹ Lina Magnusson and others, “Mobility and satisfaction with lower-limb prostheses and orthoses among users in Sierra Leone: a cross-sectional study”, *Journal of Rehabilitation Medicine*, vol. 46, No. 5 (May 2014).

⁸² WHO and UNICEF, *Global Report on Assistive Technology*.

⁸³ Clinton Health Access Initiative and ATscale, *Assistive Products Market Report 2024*, p. 101.

72. In low- and middle-income countries, a shortage of qualified professionals limits access to quality services. Women, girls and older women with disabilities should be represented in training to ensure gender equality and tailored service delivery. Limited training also prevents practitioners from adapting to advances. In Uganda, primary healthcare workers have received training to identify and refer individuals needing rehabilitation and assistive technologies.⁸⁴

73. Governments and educational institutions should integrate training, standardize curricula and certify programmes to ensure the availability of skilled personnel for assistive product provision and maintenance. Local programmes, partnerships with international organizations and digital platforms can help build capacity and overcome geographical barriers. The WHO online training programme in priority assistive products is designed to provide relevant training to primary healthcare and other personnel to provide support for the use of assistive technology.⁸⁵ In Papua New Guinea, primary health services personnel have been trained using the WHO programme to provide related simple assistive products.⁸⁶

74. Staff need to be empowered to fulfil their role using assistive technologies and equipped with the necessary facilities, materials and assistive products. Offering financial support, including scholarships and grants, makes training more accessible and attracts professionals, helping build a skilled workforce for delivering quality services.

IV. Digital and assistive technologies in care and support systems

75. Following the previous report,⁸⁷ the theme of the annual debate of the Human Rights Council in 2024 was “Good practices of support systems enabling community inclusion of persons with disabilities”. The Council also adopted resolution 55/8 on that topic. In its resolution 54/6, the Council mandated OHCHR to prepare a comprehensive thematic study on the human rights dimension of care and support; the present report complements that report.

76. In its resolution 79/1, the General Assembly adopted the Pact for the Future, in which Member States decided to significantly increase investments to close the gender gap, including in the care and support economy, and create decent jobs for youth, while dismantling inequalities in that sector. They also decided to enhance inclusion for persons with disabilities and invest in assistive technologies.

77. The International Labour Conference recognized the care economy as an economy that includes all paid and unpaid work supporting well-being across life stages, involving caregivers, recipients and service providers. Shaped by policies and norms, it depends heavily on unpaid caregiving, primarily done by women, affecting gender equality.⁸⁸ The care and support economy, as recognized in the Pact for the Future, is an evolving concept that expands on the definition of care economy to reflect the specific rights of persons with disabilities and older persons in equal standing with others.

78. “Support” means providing assistance to enable persons with disabilities to perform daily activities, exercising choice and control over such support, and to participate in their communities. Support systems comprise a network of people, products and services – both formal and informal – that deliver this assistance. Support is a recognized human right under the Convention on the Rights of Persons with Disabilities.⁸⁹

⁸⁴ ReLAB-HS, “Rehabilitation and assistive technology are essential components of universal health coverage” (2023), p. 4.

⁸⁵ WHO, “Training in assistive products (TAP)”, available at <https://www.who.int/teams/health-product-policy-and-standards/assistive-and-medical-technology/assistive-technology/training-in-products>.

⁸⁶ WHO and UNICEF, *Global Report on Assistive Technology*, p. 72.

⁸⁷ [A/HRC/55/34](#).

⁸⁸ ILO, Resolution concerning decent work and the care economy.

⁸⁹ [A/HRC/52/52](#), paras. 4 and 22–25.

A. Transforming care and support systems with digital technologies

79. Governance is both a development and human rights issue, as ineffective administrative systems exacerbate challenges faced by persons with disabilities, often increasing their disability-related extra costs and at times leading to denial of their human rights. Poor cross-sector coordination and inadequate disability management systems, including registration, hinder access to necessary care and support, creating redundancies and exclusion.

80. In Bosnia and Herzegovina, the interactive Map of Rights and Services for Persons with Disabilities and the Elderly facilitates cross-sector coordination, reducing burdens for users and enhancing access to services. People-centred care and support systems are critical to effectively deliver on human rights objectives and meet diverse needs.⁹⁰

81. Women are disproportionately affected by inefficient governance systems because they are assigned the role of primary care and support givers. Digitally streamlining and integrating administrative processes for various care and support services, including childcare, disability and older persons' support, can reduce the time and tasks required for unpaid care and support givers.

82. A digitally equipped one-stop shop involving key ministries – such as social development, health, transport and innovation – can streamline processes and reduce time constraints for those providing or requiring care and support. The lack of comprehensive data on services and needs continues to hinder the effective design of holistic care and support systems. In Bogotá, a care and support georeferencing tool tracks community initiatives through surveys of women undertaking unpaid care and support-giving roles, who often self-organize to close local gaps.⁹¹

83. National care and support policies establish eligibility criteria for accessing related services and benefits, commonly requiring a disability assessment and registration. Bermuda has the National Disability Register mobile application, facilitating disability registration and, ultimately, increasing data collection and management to guide policy implementation, access to care and support services and human rights.⁹²

84. Digital services, such as telehealth and remote monitoring, reduce trips to medical facilities, freeing up time for self-care, including for people with disabilities. Smart home devices automate chores, while applications help households share domestic work. Women, overrepresented in such work, benefit from them. Mental health applications offer emotional support, yet usage remains low due to a lack of cultural tailoring and limited awareness.⁹³

85. Robotics assist with physical tasks and online shopping with home delivery saves time. Online support networks offer quick access to advice and resources, and digital health records simplify medical information management. Moreover, remote work options provide greater flexibility, and assistive technologies reduce the need for in-person support, allowing people to manage time more effectively.

86. Managing self-care and support is often time-consuming and complex, but digital technologies have the potential to streamline and simplify this process. For example, in Indonesia, a live-streamed health education session in Indonesian sign language hosted on an

⁹⁰ United Nations Entity for Gender Equality and the Empowerment of Women, “A new interactive map enables easier access to social rights and services in Bosnia and Herzegovina”, 15 February 2024, available at <https://eca.unwomen.org/en/stories/news/2024/02/a-new-interactive-map-enables-easier-access-to-social-rights-and-services-in-bosnia-and-herzegovina>.

⁹¹ Daniela de los Santos, “Mapping care: innovative tools for georeferencing care supply and demand in Latin America and the Caribbean”, Policy Notes No. 14 (UNDP, 2022).

⁹² UNDP, “Bermuda goes digital to bolster inclusion of persons with disabilities”, 30 April 2024, available at <https://www.undp.org/jamaica/press-releases/bermuda-goes-digital-bolster-inclusion-persons-disabilities>.

⁹³ Yonas Deressa Guracho, Susan J. Thomas and Khin Than Win, “Mobile mental health application use, and app feature preferences among individuals with mental disorders in Ethiopia: a cross-sectional survey”, *International Journal of Medical Informatics*, vol. 192 (December 2024).

e-commerce platform improved self-care knowledge and access for the deaf community.⁹⁴ In Saudi Arabia, the Seha Virtual Platform provides telemedicine services, including consultations for assistive technology needs.⁹⁵

87. Care and support systems can become more efficient and effective by streamlining processes, thereby improving policy management and service delivery. Nevertheless, human support and interaction remain critical, as many persons are affected by the digital divide. A balance between automation and human decision-making is necessary. While digital tools, such as artificial intelligence and automated decision-making systems, can enhance efficiency, they cannot replace the compassion, judgment and discretion that human administrators bring to social protection. Social security administrations should ensure that digital technologies complement rather than replace human interaction, especially in complex individual situations.⁹⁶

B. Assistive technologies to enhance outcomes of care and support systems

88. Persons with disabilities need access to assistive products suited to their environment and support network. Strategies should ensure long-term functionality, with support networks involved in decisions as needed to confirm that the product truly meets individual needs.

89. In care and support systems, assistive technologies save time in provision and self-care. For example, an electronic wheelchair eliminates the need for third-party pushing. Integrating such time-saving technologies into person-centred care and support planning reduces unpaid and paid care and support work, lowering overall costs.⁹⁷

90. Persons with disabilities should have equitable access to assistive technologies, recognizing the limitations thereof. While technology aids independence, human support remains crucial for personalized assistance, emergency communication and navigating complex environments, especially for individuals with intellectual, visual or hearing impairments.

91. Assistive technologies such as powered wheelchairs are essential for mobility but do not solve long-distance travel needs. Accessible public transport and specific point-to-point services are still crucial to meet mobility requirements.⁹⁸ Similarly, for persons with visual impairments, applications using data from global navigation satellite systems may assist with navigation, but cannot replace the need for safe, accessible transport services in complex or rural environments.

92. While housing adjustments and assistive technologies enhance accessibility, they do not resolve all challenges. Voice-activated systems can facilitate tasks for people with visual or motor impairments within the home, but external accessibility – such as entryways, communal spaces and accessible bathrooms – often requires additional architectural modifications. For individuals with cognitive impairments, technologies such as reminder applications and smart home systems help with daily routines, yet critical safety features, such as accessible emergency exits and clear, navigable pathways, are also essential for overall safety and usability in shared or public spaces.

93. The diverse needs across groups of persons with disabilities underscore the value of a balanced approach that combines human and technological support. Rather than discouraging

⁹⁴ PR Newswire, “Supporting inclusivity and empowerment in healthcare, Bayer hosted Indonesia’s ‘First Live Stream Using Indonesian Sign Language for Self-Care Health Education’”, 11 June 2024, available at <https://www.prnewswire.com/apac/news-releases/supporting-inclusivity-and-empowerment-in-healthcare-bayer-hosted-indonesias-first-live-stream-using-indonesian-sign-language-for-self-care-health-education-302169338.html>.

⁹⁵ See <https://www.moh.gov.sa/en/Ministry/Projects/Pages/Seha-Virtual-Hospital.aspx>.

⁹⁶ Brian Lee-Archer, “Effects of digitalization on the human centricity of social security administration and services”, ILO Working Paper, No. 87 (Geneva, ILO, 2023).

⁹⁷ United Nations Sustainable Development Group, “Transforming care systems in the context of the Sustainable Development Goals and *Our Common Agenda*”, UN System Policy Paper (2024).

⁹⁸ Expert Group for Urban Mobility set up by European Commission, “How to guarantee public transport inclusiveness considering aging, gender, disabilities and reduced mobility” (2024).

investment, these limitations highlight the importance of expanding access to quality assistive technologies, which can greatly improve autonomy and quality of life. An integrated system – uniting accessible infrastructure, reliable human support and advanced assistive technologies – can provide the comprehensive care and support essential for individuals with varying impairments to live more independently.

V. Conclusion and recommendations

94. In the present report, the role of assistive technologies and digital technologies in relation to the enjoyment of human rights, particularly the right to live independently in the community under article 19 of the Convention on the Rights of Persons with Disabilities, is highlighted. Building on previous reports, the report shows how such technologies contribute to gender-, age- and disability-responsive comprehensive care and support systems.

A. Digital technologies

95. As outlined by the Committee on the Rights of Persons with Disabilities, digital technologies serve as e-governance tools, information resources and assistive devices, with the potential to enhance the enjoyment of human rights for persons with disabilities, while also raising human rights risks.⁹⁹ The recommendations below are aimed at increasing the positive impact of digital technologies.

1. E-governance: rights, participation and accountability

96. **States and relevant stakeholders should:**

(a) **Establish rights-centred e-governance frameworks that ensure accessibility, anti-discrimination measures and transparency in data management regarding the right to privacy and equality;**

(b) **Put in place laws and policies that guarantee that e-governance is accessible and secure and that it complements – rather than replaces – human interaction, supporting fair and ethical participation for all;**

(c) **Ensure the participation of persons with disabilities of all genders in policy co-design, enforce transparency to build trust and empower users to achieve independent access;**

(d) **Establish and implement independent oversight bodies to monitor e-governance systems, including their use of artificial intelligence. Such bodies should oversee the human rights implications of such systems and support accountability for any human rights violations or abuses arising from their use;**

(e) **Enforce human rights standards in public-private collaboration addressing infrastructure and affordability gaps, particularly for underserved areas and populations, including women and older persons with disabilities, and persons with disabilities in all their diversity;**

(f) **Ensure that technology companies, guided by State regulation and the Guiding Principles on Business and Human Rights, embed human rights due diligence within their operations, actively address risks and collaborate with both Governments and affected communities.**

2. Access to information and the right to privacy

97. **States and relevant stakeholders should enforce accessibility standards, ensure sufficient data protection and transparent data practices and align digital platforms**

⁹⁹ General comment No. 2 (2014), paras. 21, 22 and 38; general comment No. 4 (2016), para. 23; general comment No. 5 (2017), para. 39; and general comment No. 7 (2018), para. 54.

with human rights law, as emphasized in the Convention on the Rights of Persons with Disabilities, with States leading by example.

B. Assistive technologies

98. Access to assistive technologies is a human right, and is essential for persons with disabilities, enabling independence, greater participation and improved quality of life. Digital and non-digital assistive products support functional independence, empowering individuals to engage in education, work and social life. Beyond individual benefits, assistive technologies contribute economically and socially, reducing healthcare costs, boosting productivity and mitigating risks of exclusion. However, access to quality, affordable products remains limited due to high costs, low awareness and a shortage of quality products, trained providers and gender integration. These persistent barriers call for coordinated efforts.

1. Awareness: targeted campaigns and inclusive outreach

99. States and relevant stakeholders should:

(a) **Implement targeted public education campaigns to bridge the knowledge gap on assistive technologies, emphasizing their benefits and addressing intersecting and multiple grounds of discrimination, including gender and age. Such campaigns should be tailored and disseminated through local media, community health and social workers, local governments and rural organizations;**

(b) **Partner with disability organizations and leverage digital platforms to broaden outreach, particularly in underserved and rural areas;**

(c) **Empower persons with disabilities to make informed choices, increase demand and stimulate investment in accessible, affordable and high-quality assistive products.**

2. Affordability: local partnerships and global support

100. States and relevant stakeholders should:

(a) **Enhance value-added chains through local manufacturing, streamlined distribution and public procurement strategies to reduce prices and increase availability;**

(b) **Foster private sector engagement through tax incentives, subsidies and grants for local production, while promoting public-private partnerships to boost innovation and access. States should also facilitate collaboration among stakeholders in the demand, production, distribution and sales of assistive technologies to optimize efficiency, improve customization and enhance affordability and access, including through digital technology;**

(c) **Encourage local production and establish subnational regional centres or distribution hubs, particularly serving rural areas, to bring products closer to end users, reducing travel costs and time;**

(d) **Enter into bulk purchasing agreements, coordinated through national and international partnerships, to enable economies of scale to drive down costs;**

(e) **Engage in South-South cooperation and trade agreements to facilitate knowledge transfer, support regional production hubs and expand access across low- and middle-income countries, including in rural areas, fostering self-sufficiency and reducing reliance on imported products;**

(f) **Implement subsidies, social insurance schemes and transport support, including for rural residents, to cover the costs of acquiring and maintaining assistive products.**

3. Quality: standards, local production and global collaboration

101. States and relevant stakeholders should:

- (a) Establish and enforce quality standards across the production, distribution and service of assistive products for use by persons with disabilities;
- (b) Implement regulatory frameworks that require certification and quality assurance and meet safety and performance criteria;
- (c) Invest in research and training for skilled providers to ensure that devices are well fitted and maintained, increasing their durability and effectiveness;
- (d) Foster local production to improve quality and to allow manufacturers to tailor products to the specific requirements and environments of users;
- (e) Collaborate with international organizations for knowledge exchange and the sharing of promising practices.

4. Training: education and accessible delivery

102. States and relevant stakeholders should:

- (a) Collaborate with educational institutions to integrate training on assistive technologies into healthcare and social care and support curricula;
- (b) Establish standardized programmes and create certification pathways that ensure consistency and quality across providers;
- (c) Invest in continuing education and partner with international organizations for online training and resource-sharing to help address regional gaps in expertise;
- (d) Implement mobile units and telehealth services consultations to bridge service gaps in remote locations;
- (e) Ensure that the content and delivery of training are gender-responsive, including in terms of gender representation in training delivery and target populations.

C. Digital and assistive technologies, and their integration into care and support systems

103. Digital and assistive technologies that address the rights and needs of persons with disabilities can reduce challenges in governance of care and support systems, reducing costs and time poverty for persons with disabilities and persons in their households providing care and support, particularly women.

104. States should:

- (a) Include persons with disabilities and their human rights in digital governance of care and support systems for them to be gender-, age- and disability responsive;
- (b) Adopt people-centred design and provide digital administrative one-stop shops for service management and digital disability registration, always balancing automation and human interaction;
- (c) Respect the autonomy of persons with disabilities to have control over the support they receive, including through digital assistive products;
- (d) Integrate assistive technologies into the design and budgets of care and support systems, addressing their limitations and benefits to enhance independence, access to environments and communication, and reduce reliance on human support, particularly from women disproportionately involved in unpaid care and support giving.

105. States should consider increasing support to international organizations and national systems to mainstream disability rights in connection with digital and assistive technologies as part of the care and support economy and a broader effort to move towards a human rights economy.

106. States should increase capacity on:

(a) Disability-inclusive trade and tariffs, and the transfer of technology, to increase access to quality digital and assistive products reflecting the rights and support needs of persons with disabilities;

(b) The regulation of the care and support sector for service transformation, including in micro-, small and medium-sized enterprises, the non-profit sector and the social and solidarity economy (through cooperatives and community-based organizations), with a focus on local governments, applying the Guiding Principles on Business and human rights;

(c) Fiscal space expansion, to increase funding and access to digital devices and assistive products by users, as well as fiscal incentives to increase local production and services.
