

Systems Strengthening for Assistive Technology Service Delivery



The newly-fitted optical lab at Kenyatta National Hospital, Nairobi, Kenya, allows AT users to be prescribed and receive their spectacles in one place. Photo: ATscale/Carlisto Ochieng

What is systems strengthening for assistive technology?

Access to assistive technology relies on an effective system built on key interconnected building blocks; governance and leadership, financing, service delivery, workforce development, assistive products, data and information systems, all centered around people. Strengthening assistive technology systems requires coordinated investment in each of these building blocks to enhance their capacity and ensure they function efficiently and cohesively. Systems strengthening lies at the heart of ATscale's country investments, tailored to specific national contexts.



The critical 'building blocks' of systems strengthening for assistive technology

What are the key challenges?

Worldwide, more than 2.5 billion people need one or more assistive products, such as wheelchairs, hearing aids, prostheses, spectacles or digital assistive technology. This number is expected to rise to 3.5 billion in 2050.

Assistive technology service delivery is the process of assessment, fitting, provision, training, maintenance and follow-up to those requiring assistive technology. Service delivery is a fundamental part of the assistive technology system; without the right service delivery approach, programmes will not have equitable reach and wider coverage of AT users; without assessment, the incorrect product may be recommended; without fitting, an assistive product may be the wrong size and can not be used correctly; without maintenance, a product is likely to be discarded once an issue appears. It is therefore crucial that all assistive technology users are able to access appropriate services without arduous travel or financial hardships.

Services are often concentrated in large urban centres, making them difficult to access for those in rural and remote areas, both logistically and financially. Services, where they do exist, may not have the capacity for all those who require them, may not be able to provide services appropriate to a specific functional domain or might not be able to provide the level of support required. Services may also not be gender-equitable or climate-responsive, further isolating individuals and communities from essential services.



How does ATscale address these challenges?

ATscale supports efforts to expand and strengthen service delivery methods across assessment, fitting, provision, training, maintenance and follow-up.

Graphic: World Health Organization and the United Nations Children's Fund (UNICEF), Global report on assistive technology, 2022, Geneva

This is done in a number of ways, including funding for integration of services into national health or social system networks, renovating infrastructure or establishing new facilities, providing new equipment, innovative delivery and outreach methods and supporting research into new and innovative screening, provision and follow-up options. In line with ATscale's priority areas, ATscale focuses on services related to mobility, communication, vision and hearing. This is all done with the aim of improving service delivery and making services more accessible to those who need them, both geographically and financially.

Improving facilities and funding new equipment for fitting and production of assistive products allows services to be more efficient in their provision, meaning more people can benefit from assistive technology. Up-to-date equipment also helps manufacture devices that are longer lasting, comfortable and appropriate, requiring fewer follow-up visits and reducing the likelihood of discarding products. Using renewable energy, such as solar power, allows facilities to be resilient to power outages and climate-related factors. Promoting these services and facilities within communities raises awareness, such as through women's community groups, organisations of persons with disabilities and youth groups.

Exploring new service delivery methods allows countries to move away from traditional clinic-based provision and bring services closer to the users, including training school teachers and community health workers to identify those who would benefit from assistive technology. Novel screening techniques also allow the same screening services to be delivered without bulky and expensive machinery.

Stories of Impact

Rwanda - The Rwanda Biomedical Centre and UNICEF Rwanda, supported by ATscale, launched the Ear and Hearing Care (EHC) programme to strengthen **Rwanda's** service delivery for hearing impairments. This programme has equipped health facilities with primary audiology equipment for screening and has supported the capacity building of 2,865 healthcare providers and community healthcare workers. Five district hospitals outside Kigali have also received high-tech audiology equipment, decentralizing services and reducing travel burden. Almost 2,000 children have been screened so far, with over 500 being fitted with digital hearing aids, improving their quality of life and educational integration.



A doctor using an otoscope conducting an ear examination on a child, helped by their parent. The doctor is then able to fit the child with a hearing aid if required. Photo credit: UNICEF/2023/Iyakaremye

Senegal - Assistive technology services can often be confined to capital cities and large urban areas, with those in more rural and remote regions being unable to access services. In **Senegal**, the ATscale-supported programme has funded the acquisition of two vehicles that serve as mobile units for screening and provision of vision, hearing and prosthetic services.



The vehicle for the “Bokk Na Ci” (“I am included”) programme in Senegal is used to reach regions outside Dakar for vision and hearing screening and provision of assistive products including prostheses. Photo credit: CNAO

Autorefractor - To combat uncorrected refractive error, a significant global public health challenge, ATscale commissioned a multi-country study on handheld autorefractors to assess the clinical effectiveness of the technology. The study was conducted across Ethiopia, Nepal and Nigeria and was carried out by IQVIA and the LV Prasad Eye Institute, aiming to compare handheld autorefractors with conventional refraction methods, evaluate prescription alignment and determine the feasibility of integration into public health systems in low-resource settings. The findings have been published alongside country guidance to distill the findings for all stakeholders across eye and vision care.



The study reports disseminate both the technical results and recommendations for countries wanting to improve spectacle provision using this technology. Photo credit: ATscale

About ATscale

ATscale is a cross-sector global partnership with a mission to improve people’s lives through assistive technology. It catalyses action to ensure that, by 2030, an additional 500 million people in low- and middle-income countries get the life-changing assistive technology they need.

Together, let’s ensure everyone, everywhere can access and afford the assistive technology they need, enabling a lifetime of potential.



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