



Local Production of Standardized Assistive Technologies for Persons with Disabilities (PWDs) in Nigeria

A NATIONAL ROADMAP

2021 - 2025





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FOREWORD

The world over, an estimated one (1) billion people are said to be living with disabilities. In Nigeria, about 15% of our teeming population suffers from one disability or the other. (Source: World Health Organization)

Caring for and meeting the needs of people with disabilities including older persons in terms of protection of their rights, access to; healthcare facilities, educational facilities and economic activities has become a discussion of national importance, therefore, we cannot afford to remain isolated among comity of nations with respect to paying special attention to her citizens who have special needs.

Nigeria signed and ratified the United Nations Convention on the Rights of Persons with Disabilities (UNCRPD) and has consistently adopted/adapted policies consciously aimed at improving the lives of people with disabilities. The country, at every opportunity has tried to ensure that persons with disabilities (PWDs) enjoy rights to independent living, inclusiveness and participation in the society. To this extent, Nigeria has enacted the Discrimination Against Persons with Disabilities Prohibition Act to ensure full integration of PWDs into the society.

Developing a roadmap on local production of Assistive Technologies (AT) for people with Disabilities is one that we consider a major step in easing the lives of PWDs. The roadmap intends to ensure quality in the production of AT, improve standardization of AT, provide enabling environment for job creation both for local producers of AT and PWDs.

We are confident that if the recommendations and key programmes and specific activities contained in this roadmap are actioned meticulously, that we will be able to promote an egalitarian society and stimulate humanitarian services across the country.

This roadmap has therefore been developed by the Federal Ministry of Humanitarian Affairs, Disaster Management and Social Development with the technical support of National Technical Working Group (NTWG) of the Inter-Ministerial Committee on Local Production of Assistive Devices for Persons with Disabilities in Nigeria, the Stakeholders and the Consultant.

Sadiya Umar Farouq

Honourable Minister,

Federal Ministry of Humanitarian Affairs, Disaster Management and Social Development

PREFACE

The Ministry through her Special Needs Department has continuously made concerted effort towards improving the lives of people with disabilities in Nigeria. These efforts have, at different times, aimed at specific objectives of generally fetching better living outcomes for PWDs in Nigeria.

Prior to this time, considering the urgency to meet the various needs of PWDs in Nigeria, the Special Needs Department of the Ministry has been procuring AT for identified PWDs in Nigeria; most of them being foreign AT, either procured directly by the Ministry or donated. Conversely, there were a number of setbacks with most of the imported AT ranging from poor fitting for end users, lack of comfort to users and in some extreme cases they cause further injury to users. Presently, the Commission is statutorily responsible for procurement of AT in line with section 38 (1) of the Discrimination Against Persons with Disabilities Prohibition Act.

Having reviewed the aforementioned set-backs, the Ministry deemed it fit to urgently and critically consider local production of assistive technologies for PWDs in Nigeria. The first step was to do an assessment visit to all 36 States and FCT to identify local producers of ATs and in fact build their capacities to be able to produce standardized devices.

Further to the assessment visit, it was realized that developing locally produced AT is a good initiative that must be actualized carefully and thoroughly in line with best practices, it then became important to first develop a Roadmap that will guide the local production, procurement and distribution of AT for PWDs in Nigeria.

The aforementioned efforts and even a lot more led to the design and development of the Roadmap on Local Production of Standardized Assistive Technologies for People with Disabilities in Nigeria.

This Roadmap has therefore been developed to pilot the implementation of the key enabling actions, activities and programmes that will be instrumental to an organized production, procurement and distribution of Assistive Technologies for PWDs in Nigeria.

Bashir Nura Alkali, FCA, FCTI

Permanent Secretary,

Federal Ministry of Humanitarian Affairs, Disaster Management and Social Development

ACKNOWLEDGMENTS

The Special Needs Department appreciates the Leadership of the Honourable Minister Sadiya Umar Farouq and the Permanent Secretary Bashir Nura Alkali of Federal Ministry of Humanitarian Affairs, Disaster Management and Social Development for the support and approval for the development of this document of national importance – Roadmap on Local Production of Assistive Technologies for People with Disabilities.

I thank the staff of the Department for their demonstration of doggedness and enthusiasm through-out this process and particularly in the way all stakeholders were coordinated to achieve this feat.

The National Technical Working Group has been very indefatigable in the production of this Roadmap. Their cooperation, invaluable recommendations and inputs are well articulated. We acknowledge and appreciate it a lot. Indeed, the group is technical, in approach, coordination, thinking and critiquing.

The Generality of the Stakeholders who from time to time make out time out of their very busy individual schedules to see that the development of this Roadmap is actualised is duly acknowledged. Thank you all for making this a reality.

The Leprosy Mission Nigeria, ably represented by the Head of Programmes & Operations Mr. Pius Ogbu Sunday has earned the applaud of this department for their special interest, dedication and commitment to this course.

Our Consultant, Vintsolve Global Consults (VGC) Ltd, really, you are a consultant per excellence, you simplified the whole process with your latitude of experience and expertise. You are most appreciated.

Nkechi F. Onwukwe (Mrs)

Director, Special Needs Department

Federal Ministry of Humanitarian Affairs, Disaster Management and Social Development

ABBREVIATIONS AND ACRONYMS

S/N	Abbreviations & Acronyms	Meaning
1	AT	Assistive Technologies
2	CCA	Country Capacity Assessment
3	CHAI	Clinton Health Access Initiative
4	DPOs	Disabled Persons' Organizations
5	DFAT	Department of Foreign Affairs and Trade
6	DFID	Department for International Development
7	EU	European Union
8	FMHADMSD	Federal Ministry of Humanitarian Affairs, Disaster Management and Social Development
9	FMoH	Federal Ministry of Health
10	IEC	Information, Education and Communication
11	MAARDEC	Mobility Aid and Appliances Research and Development Content
12	MRTB	Medical Rehabilitation Therapy Board of Nigeria
13	NAFDAC	National Agency for Food and Drug Administration and Control
14	NCPWD	National Council for Persons with Disability
15	NGOs	Non-Governmental Organizations
16	NHIS	National Health Insurance Scheme
17	NPOOTS	Nigerian Prosthetic, Orthotic and Orthopaedic Technology Society
18	NTWG	National Technical Working Group
19	ODORBN	Optometrists & Dispensing Opticians Registration Board of Nigeria
20	P&Os	Prosthetics & Orthosis
21	PWD	People with Disabilities
22	SDG	Sustainable Development Goal
23	SON	Standard Organization of Nigeria
24	UNCRPD	United Nations Convention on the Rights of Persons with Disabilities
25	WHO	World Health organization

EXECUTIVE SUMMARY

Approximately 25 million out of the 200 million estimated Nigerians are living with one disability or the other (World Health Organization's 2011 World Disability Report). Following Nigeria's signing up to the United Nations Convention on the Rights of Persons with Disabilities (UNCRPD), the Special Needs Department of the Federal Ministry of Humanitarian Affairs, Disaster Management and Social Development has been committed to ensuring that all the provisions of the Convention are implemented. In line with Articles 19 and 20 of the Convention, the country, through various measures has been trying to ensure that millions of Persons with Disabilities (PWDs) enjoy the right to independent living, inclusion and participation in all aspects of life through access to improved AT support; and encouraging local production of mobility aids and other Assistive Devices.

It then became imperative to develop a National Roadmap on the Local Production of Assistive Technologies for People with Disabilities. The Roadmap is focused on the production, procurement and distribution of AT and it is designed to achieve objectives such as provision of guidance for production, procurement and distribution of Assistive Technologies for PWDs in Nigeria; ensuring quality control in local production of Assistive Technologies for PWDs in Nigeria; mainstreaming local production of Assistive Technologies in innovative and industrial development of the Country; helping in providing enabling environment for employment creation through local production of Assistive Technologies for PWDs in Nigeria; and ensuring availability and affordability of Assistive Technologies for PWDs in Nigeria.

The Roadmap captures both the global and Nigeria Contexts of Assistive Technologies, it examined the current situation of people with disabilities in Nigeria, their AT and the local producers of the AT from the perspective of demography, human rights, disability situation, health situation, stigma, disaster risk management and monitoring and evaluation of the change.

Strategic priorities and objectives were reiterated and the establishment of National Commission for Persons with Disability was also reinforced.

Certainly, we believe local production of Assistive Technologies for Persons with Disabilities is a Step in the right direction for us as a Nation and that the Standardization of the Production, Procurement and Distribution of Assistive Technologies in Nigeria is a welcome development and will ultimately secure better lives for PWDs.

PART 1: CONTEXT

1.1 Introduction

Across the world, people with disabilities (PWDs) have poorer health outcomes, lower education achievements, less economic participation and higher rates of poverty than people without disabilities. This is partly because people with disabilities experience barriers in accessing services and more importantly because PWDs lack access and means to afford appropriate assistive technologies.

Assistive technology plays an important role in maintaining and improving people's ability to function and thereby promote their well-being. It enables people with difficulties in function to lead healthy, productive, independent, and dignified lives, participating in education, the labour market and social life. Assistive products, a key subset of assistive technology, are needed by a broad range of population groups, such as older people, people living with noncommunicable diseases and people with disabilities and chronic conditions such as mental health problems, injuries, and polio. Each one of us is likely to need assistive products at some stage of our lives due to temporary or permanent functional decline or difficulties.

Access to assistive technology is thus an essential component in the continuum of health care and universal health coverage. It needs to be channeled into efforts geared towards the achievement of target 3.8 of the Sustainable Development Goals (SDGs) on universal health coverage. The United Nations Convention on the Rights of Persons with Disabilities (CRPD) also identifies access to mobility aids, assistive devices and technologies as a human rights obligation that every Member State must fulfil.

The Federal Ministry of Women Affairs and Social Development, through its Rehabilitation Department, then started this work in 2018, it is now known as the Special Needs Department Under the Federal Ministry of Humanitarian Affairs, Disaster Management and Social Development, it has the mandate to coordinate all national responses on issues of disability. Nigeria as a signatory to the United Nations Convention on the Rights of Persons with Disabilities (UNCRPD), is committed to ensuring that all the provisions of the Convention are implemented. In line with Articles 19 and 20 of the Convention, the country, through various measures has been trying to ensure that millions of Persons with Disabilities (PWDs) enjoy the right to independent living, inclusion and participation in all aspects of life, through access to improved AT support; and encouraging local production of mobility aids and other Assistive Devices. These are to be in manners, forms and choices of the PWDs, it should be of high quality and affordable prices.

1.2 Global Context of Assistive Technology

Today, over 1 billion people need an Assistive Technology (AT), but an estimated 90% do not have access to the AT they need (World Health Organization).

- **200 million** people with low vision do not have access to low-vision assistive products
- **75 million** in need of wheelchairs, (5-15% have access)
- **466 million** experience hearing loss, (10% of need is met)
- ... of those who gain access, abandonment rate of assistive products could be **as high as 75%**

Source: World Health Organization (WHO)

- **ATscale** launched at the Global Disability Summit in July 2018 as a cross-sector partnership for Assistive Technology (AT)
- **ATscale's goal** is to catalyze action to ensure that 500 million more people globally are reached with life-changing AT by 2030.
- **ATscale's vision** is to enable a lifetime of potential where every person can access and afford the life-changing AT they need.
- **ATscale's mission** is to build a **cross-sector partnership** that is a **catalyst** for change, **amplifies** existing work, and **coordinates** and **mobilizes** global stakeholders with a **unified strategy** to increase availability of and access to affordable and appropriate AT.

Source: atscale2030.org

1.3 Nigeria Context of Assistive Technology

Assistive technology (AT) is an umbrella term covering the systems and services related to the delivery of assistive products and services, such as wheelchairs, eyeglasses, hearing aids, prosthetics, and personal assistance devices. Nigeria is a country with close to 200 million people, at least 15% of whom are estimated to be living with disabilities. Persons with disabilities have poorer health outcomes, lower education achievements and less economic participation than people without disabilities (*WHO World Report on Disability 2011*).

Children with disabilities experience poorer health, limited opportunities for education and economic opportunities and encounter greater inequalities than children without disabilities (*UNICEF & WHO. Assistive technologies for children with disability; creating opportunities for education, inclusion and participation 2015*). Everyone particularly older people, people with disability, people with non-communicable diseases, people with mental health conditions including dementia and autism, people with gradual functional decline need assistive technology (AT) to get out of bed and out of their houses, access education, work and employment, escape from poverty and hunger, for greater mobility, freedom and independence, inclusion and participation, leading a dignified life.

In January 2019, the Discrimination Against Persons with Disabilities (Prohibition) Act (2018) was signed into law. This law prohibits discriminating against people with a disability, with penalties for non-compliance that can be levied at individuals or corporations. It also stipulates the establishment of a National Commission for Persons with Disabilities and a five-year transitional period after which public buildings and

transport must be made accessible for persons with disabilities. The Act was generally seen and regarded as a key step towards the fulfilment of Nigeria's obligations under the CRPD. In addition to the national legislation, ten (10) of the 36 States have adopted and domesticated the Disability Act as state level disability laws in the country; they include Anambra, Bauchi, Ekiti, Jigawa, Kano, Kogi, Kwara, Lagos, Ondo, and Plateau. The 2018 National Demographic and Health Survey reported that 7 percent of the population have some difficulty with regards to various domains of disability, and 1 percent have a lot of difficulty or cannot function in at least one domain. In Nigeria, assistive technologies are not being adequately utilised, largely due to limited availability, access, and high cost.

1.4 Why Create a Roadmap for Local Production of Assistive Technologies?

Assistive Technology (AT) has a huge potential to support people with disabilities in their daily lives, Procurement of assistive products, accessories, spare parts and related services. This Roadmap is therefore designed to achieve the following objectives:

- a. Provision of guidance for production, procurement and distribution of Assistive Technologies for PWDs in Nigeria;
- b. Ensuring quality control in local production of Assistive Technologies for PWDs in Nigeria;
- c. Mainstreaming local production of Assistive Technologies in innovative and industrial development of the Country;
- d. Helping to provide enabling environment for employment creation through local production of Assistive Technologies for PWDs in Nigeria;
- e. Ensuring availability and affordability of Assistive Technologies for PWDs in Nigeria.

1.5 Humanitarianism in Human Context

Humanitarianism is an active belief in the value of human life, whereby humans practice benevolent treatment and provide assistance to other humans, in order to improve the conditions of humanity for moral, altruistic and logical reasons. Humanitarianism is today primarily understood as voluntary emergency aid in a transnational context, but it overlaps with human rights advocacy, actions taken by governments, development assistance, and domestic philanthropy.

The principles of humanity, neutrality, impartiality and independence are fundamental to humanitarian action.

Humanity means that human suffering must be addressed wherever it is found, with particular attention to the most vulnerable.

Neutrality means that humanitarian aid must not favour any side in an armed conflict or other dispute.

Impartiality means that humanitarian aid must be provided solely on the basis of need, without discrimination.

Independence means the autonomy of humanitarian objectives from political, economic, military or other objectives.

PART 2: CURRENT SITUATION

2.1 Demographic Situation						
Impairment	Stakeholders	Human resources	Provision	Policy and financing	Product and procurement	Population data
Mobility	<ul style="list-style-type: none"> There are multiple NGOs, community based organizations, and local producers in the space. The Ministry of Humanitarian Affairs has also implemented several initiatives in this impairment area. 	<ul style="list-style-type: none"> There are 89 registered P&Os and P&O assistants in Nigeria. Close to 5,000 registered physiotherapists. The number of rehabilitation professionals with knowledge and experience in wheelchair fitting is unknown. 	<ul style="list-style-type: none"> There are inadequate guidelines or policies for prescribers or providers of mobility assistive devices 	<ul style="list-style-type: none"> Mobility assistive devices are explicitly mentioned in the revised policy on persons with disabilities. Prosthetics are covered under the NHIS. 2018 and 2019 budgets for Ministry of Women Affairs were not specific to assistive devices; the budget was combined with other items. 	<ul style="list-style-type: none"> No quality assurance mechanisms in place yet. National Standards Organization of Nigeria has a technical committee on assistive devices for persons with disabilities. An estimated 10% by public sector; 60% by private and 30% by non-profit sector¹. 	Government currently does not collect information on this functional impairment
Vision	<ul style="list-style-type: none"> NGOs in the space include: Christian Blind Mission, SightSavers, and Brien Holden 	Clinical specialists in this field include optometrists, ophthalmologists, ophthalmic	In the public sector, at primary healthcare level: delivery of basic ophthalmic services including	<ul style="list-style-type: none"> FMoH published the treatment guidelines for delivery of child health services in 	<ul style="list-style-type: none"> No standards available for products. White Guide canes: made locally and 	3.6 million adults 40 years and older were estimated to have mild to moderate visual

PART 2: CURRENT SITUATION						
2.1 Demographic Situation	Stakeholders	Human resources	Provision	Policy and financing	Product and procurement	Population data
Impairment	<p>Vision Institute. National Eye Health Programme and the National Eye Centre under the Federal Ministry of Health are active in this space. Professional and civil society associations such as the Nigerian Pediatrics Ophthalmology and Strabismus Society, Nigerian Optometric Association, Nigeria Ophthalmic</p>	<p>assistants, and ophthalmic nurses. Non-clinical workers including ophthalmic technicians, social workers or counsellors and childhood blindness coordinators.</p>	<p>diagnosis of common eye conditions. Secondary level: elaborate diagnosis of eye conditions with advanced equipment, eye treatment and dispensing of spectacles. Tertiary level: comprehensive eye care team with access to more advanced diagnostic and treatment facilities.</p>	<p>Nigeria (May 2019): defines low vision and rehabilitation for the blind child. NHIS currently covers eyeglasses.</p>	<p>imported. Eyeglasses and frames also tend to be imported.</p>	<p>impairment in 2020, and an additional 1.4 million would have severe visual impairment². An estimated 2 million people in Nigeria have albinism, a condition that also comes with low vision³</p>

PART 2: CURRENT SITUATION

2.1 Demographic Situation						
Impairment	Stakeholders	Human resources	Provision	Policy and financing	Product and procurement	Population data
Hearing	<p>Society of Nigeria, Nigeria Association of the Blind are also active.</p> <p>Academic institutions including the Universities of Ibadan, Jos, and Calabar have established audiology departments. Professional associations include Speech pathologists and audiologists Association of Nigeria. Several NGOs that procure hearing aids.</p>	<p>There are 79 speech therapists and audiologists in Nigeria. Ears, Nose, and Throat (ENT) specialists also provide clinical services.</p>	<p>No guidelines for prescribers or providers of hearing services and hearing aids were identified. However, professional associations indicate that based on global best practice, ENT specialists in general hospitals and federal medical centers should give declaration on the hearing status of a patient based on input from different</p>	<p>No policies or public sector financing mechanisms were identified for treatment or management of hearing conditions.</p> <p>Hearing aids not covered under NHIS.</p>	<p>All hearing aids and batteries are generally imported. Common brands include Oticon, Starkey and Widex.</p> <p>Only one individual in Nigeria has identified as having been trained to make ear moulds.</p> <p>Many NGOs import fairly used hearing aids that are often damaged and can lead to loss of residual</p>	<p>Number of hearing impaired in Nigeria is unknown.</p>

PART 2: CURRENT SITUATION

2.1 Demographic Situation						
Impairment	Stakeholders	Human resources	Provision	Policy and financing	Product and procurement	Population data
			specialities including audiologists, neurologists, and audiologists.		hearing in end users. No product standards.	
Cognitive	Primarily NGOs including Daughters of Charity and Down Syndrome Foundation of Nigeria.	Limited information available on skilled professionals available in Nigeria.	No guidelines for prescribers or providers of cognitive aids.	No policy, treatment, or management guidelines identified.	No standards are available for cognitive aids.	Number of cognitively impaired unknown.
Communication	Speech pathologists and audiologist association of Nigeria.	There are 79 speech therapists and audiologists in Nigeria.	No guidelines for prescribers or providers of communication aids.	No policy, treatment, or management guidelines identified.	No standards are available for communication aids.	Number of those with communication challenges (speaking or hearing or both) is unknown

Sources:

¹Medical Rehabilitation Therapists Board of Nigeria. November 2019.

²Federal Ministry of Health Treatment Guidelines for the Delivery of Child Eye Health Services in Nigeria. May 2019.

³Personal communication from National Health Insurance Scheme staff member. November 2019.

⁴National Budgets of the Federal Republic of Nigeria 2018 and 2019. Ministry of Women Affairs and Social Development. Available from: CHAI Nigeria estimates. November 2019

⁵The Nigeria National Blindness and Visual Impairment Survey 2005-2007.

⁶The Albino Foundation. November 2019

2.1.1 Available AT Situation

The table below provides a list of ATs that Persons with disabilities are currently able to access from the various service providers:

Impairment	Available AT
Mobility	Crutches (armpit, elbow, knee), Wheelchairs, Tricycle, Motorcycle support wheels, Prosthetic limbs, Orthotic devices, Orthopaedic shoes, Protective shoes, Braces, Calipers, Walking sticks, Walking frame & rollators, Neck collars
Vision	Guide canes, Reading glasses, Low-vision aids, Braille equipment, Braille books
Hearing	Digital hearing aids, Vibrating alarm clocks, Mobile devices with texting or specialized apps
Cognitive	Reminder system, Memory aids, Audio books, Mobile devices with specialized apps Pill dispenser
Communication	Communication boards, Speech generating devices, Stuttering aids, Voice amplification systems

2.2 Human Rights Situation

Recently, the Federal Government of Nigeria enacted the Discrimination Against Persons with Disabilities (Prohibition) Act, 2018. The Act addresses the promotion and protection of the rights of persons with disabilities as it relates to; accessibility, women with disabilities, right to inclusive quality education, right to living independently and being included in the community and right to equality and non-discrimination.

The law also prohibits discrimination on the basis of disability and imposes sanctions including fines and prison sentences on those who contravene it's provisions. It also stipulates a five-year transitional period for modifying public buildings, structures, and automobiles to make them accessible and usable for people with disabilities. Some states also have in place, laws that guarantee rights of persons with disabilities, these include:

- Lagos State Special People's Law, 2011;
- The Rights of Persons with Disabilities Law Ekiti State, 2013;
- Plateau State Disability Rights Law, 2005;
- Bauchi State Disability Right Law 2010;
- Nasarawa State Disability Rights Commission Law, 2018;
- Kwara State People with Disabilities (Amendment) Law, 2017;
- Kogi State Disability Persons Law, 2019;
- Anambra Disability Rights Law, 2018.
- Jigawa State Persons with Disabilities Law, 2017;
- Law for Persons with Disability in Kano State, 2018;

In addition to the laws are general Federal and State policies that address the protective rights of persons with disabilities including older persons. Some are listed below:

- National Policy on Education, 2016;
- National Policy on Special Needs Education in Nigeria and Implementation Guidelines, 2015;
- National Policy on Disabilities (Revised in 2018);
- National Policy on Ageing;
- National Health Policy, 2016;
- National Strategic Health Development Plan, 2018-2022;
- National Policy & Implementation Guidelines on Albinism in Nigeria, 2013;
- National Action Plan for the Promotion and Protection of Human Rights in Nigeria 2017-2021;
- Senior Citizens Centre Act 2018.

2.3 Disability Situation

According to the World Health Organization, in 2018, about 29 million of the 195 million people who comprise Nigeria's national population were living with a disability. Data from the 2018 Nigeria Demographic and Health Survey reveal that an estimated 7 percent of household members above the age of five (as well as 9 percent of those 60 or older) have some level of difficulty in at least one functional domain, seeing, hearing, communication,

cognition, walking, or self-care; and 1 percent either have a lot of difficulty or cannot function at all in at least one domain. These estimated rates, while significant, are probably even higher because currently available data likely underestimated the prevalence.

2.3.1 Establishment of National Commission for Persons with Disabilities (NCPWD)

On 23rd January, 2019 Nigeria's President Muhammadu Buhari signed into law the Discrimination Against Persons with Disabilities (Prohibition) Act, 2018. The law also establishes a National Commission for Persons with Disabilities. The Commission is responsible for ensuring that people with disabilities have access to housing, education, and healthcare. The Commission is empowered to receive complaints of rights violations and support victims to seek legal redress amongst other duties.

2.4 Health Situation

In Nigeria, people with disability often experience inequality in securing sufficient healthcare services as a result of barriers to accessing health facilities and the discriminatory attitude of healthcare providers practitioners. This is because there is no special educational training or interpreter package for healthcare staff to handle the medical care of people with disability, particularly with hearing impairments or vision disability. Lack of an equitable healthcare service for the disabled in Nigeria is spread across the spectrum from health/wellness promotion and disease prevention services to lack of health insurance or coverage for necessary services such as specialty care, long-term care, care coordination, prescriptions, durable medical equipment and assistive technology.

2.5 Stigma Situation

Persons with disabilities in Nigeria persistently face stigma, discrimination, and barriers to accessing basic social services and economic opportunities. For one, persons with disabilities may experience negative attitudes at family and community levels, including name-calling, negative beliefs, and misconceptions surrounding the causes of disabilities (usually associated with religious or cultural norms, and beliefs). These negative attitudes manifest in rejection, neglect, loss of respect, denial of identity or self-worth, and often result in low self-esteem, depression and isolation. This, along with structural limitations and challenges, also reinforces barriers for persons with disabilities in accessing basic services such as education, health, public transport, and social safety nets. They also experience poor educational outcomes on account of the absence of adequate facilities, including accessible infrastructure; learning materials; and teachers trained in inclusive education.

2.6 Disaster in Humanitarian Context

A humanitarian disaster occurs when the human, physical, economic or environmental damage from an event, or series of events, overwhelms a community's capacity to cope. A humanitarian emergency is an event or series of events that represents a critical threat to the health, safety, security or wellbeing of a community or other large group of people, usually over a wide area.

Natural hazards, by their nature, pose threats to the life, health, and well-being of all people. However, some groups, especially persons with disabilities, are disproportionately affected by the immediate and long-term effects of disasters due to their level of vulnerability. Social protection for people with disabilities in Nigeria is still relatively weak. However, with the establishment of the Act and the newly established Commission, it is expected that the narratives will change positively.

2.7 An Overview of AT Service Providers in Nigeria

Following, a recent assessment by the FMHADMSD, forty-nine (49) local producers of assistive devices were identified across the 6 geopolitical zones, with the north west and north east accounting for 59% of the producers visited (14 and 13 producers, respectfully). From the on-the-spot assessment, it was established that the majority of producers specialize in mobility impairment (81%) and in vision impairment (18%). Additionally, most of the producers produced tricycles (27 producers) and crutches (26 producers). Motor vehicle devices were also the third most popular devices produced by 8 producers. More than half of the producers (52%) cited access to capital funding as their most pressing challenge, and 26% indicated that erratic power supply was another pressing challenge. Nonetheless, 36% of the businesses reported having a bank account, and 27% were part of a cooperative society, indicating that they operated in the formal sector of the economy.

2.8 Current Status of Assistive Technology in Nigeria

An assessment was conducted to address the lack of adequate information related to assistive technology, especially in terms of what and where AT is available; policy including financing, data and research; products; procurement; personnel and service provision. This section presents a summary of the findings of the assessment, and the data show what the current AT situation is in Nigeria. There is an urgent need to change the way we have traditionally perceived, designed, produced, manufactured, distributed, serviced, and financed assistive products, drawing on a people-centred approach, with the aim of inclusive universal health coverage – leaving no one behind, and realizing the aspirations of the CRPD. There is need for a strategic response to improve access to assistive technology.

2.8.1 Data and Information Systems Related to Assistive Technology

Key Action: Establish data and information systems that enable data-driven decision-making and inform stakeholders of requirements for in-country AT procurement and service provision;

- a. Develop a national data collection plan with defined intervals on when data will be collected and how data will be used to inform procurement and service delivery,
- b. Integrate disability and geriatric data into existing health and social welfare information systems where appropriate,
- c. Develop and execute a robust strategic information plan to ensure that both governmental and non-governmental stakeholders in Assistive Technology are contributing data and information to the government-led system, and are well-informed of government's policies and guidelines with regards to AT procurement and service provision.

2.8.2 Stakeholder Landscape

Key Action: Establish an inclusive action-oriented multi-stakeholder platform for both government and non-government stakeholders;

- a. Establish multi-sector coordinating mechanisms at national and state levels to coordinate AT procurement and service provision in the country,
- b. Develop an AT stakeholder map, monitoring and evaluation indicators to provide visibility on the scope and duration of all AT interventions in-country.

2.8.3 Policy and Financing

Key Actions: (i) Strengthen a coordinated national effort for increased access to AT;

- a. Develop a national roadmap for accelerating access to AT,
- b. Develop a national priority assistive product list and determine priorities based on national needs,
- c. Develop an inter-agency coordinating mechanism responsible for coordinating the implementation, monitoring, and evaluation of AT activities at various government entities at federal and state levels.

(ii) Develop sustainable financing for AT procurement and provision

- d. Review national and state health insurance schemes for opportunities to expand AT provision coverage using cost lens and benefits optimization,
- e. Identify innovative financing mechanisms for AT procurement,
- f. Develop investment case for inclusion of priority AT into the National Health Insurance Scheme (NHIS) as well as State and Community Health Insurance Schemes,
- g. Determine range of assistive products to be covered under NHIS and financed based on assessed need.

2.8.4 Assistive Products and Procurement Systems

Key Actions: (i) Strengthen regulation and regulatory mechanisms for assistive products;

- a. Establish a regulatory coordinating mechanism across various regulatory agencies including SON, NAFDAC, MRTB, and ODORBN,
- b. Develop technical specifications for AT in Nigeria,
- c. Include assistive products into existing medical equipment list including the essential equipment lists at secondary and tertiary facilities,
- d. Establish and maintain a register of certified assistive products.

(ii) Strengthen public sector procurement processes for assistive products

- a. Train procurement officers and other relevant stakeholders on technical specifications for AT once developed,
- b. Develop systematic process for identifying AT need at the community level and create digital mechanisms for real-time visualization of aggregate country needs,

- c. Review and adopt appropriate models for AT tender development including hybrid models (centralized and decentralized) of tender development and purchase,
- d. Establish a transparent procurement process for AT that includes provisions for maintenance and spare parts,
- e. Test models for product evaluation that include procurement teams, service experts, and procurement teams.

(iii) Quantify national need for AT based on the need of users

- a. Adopt international best practices for quantification of national need base
- b. Develop supply chain mechanism for last mile delivery of AT

2.8.5 Human Resources

Key Action: Strengthen capacity to develop workforce related to AT;

- a. Develop curricula and materials for continuing education on provision of AT at different levels of the system,
- b. Establish center of excellence to provide training in collaboration with partners

2.8.6 Service Provision of Assistive Products

Key Actions: (i) Develop in-service standards guiding the provision of assistive technology;

- a. Form technical committee(s) to centralize standards and guidelines for AT service provision;
- b. Implement plan for ensuring that service facilities are physically, cognitively, socially, and culturally accessible.

(ii) Increase provision of assistive products in facilities within the governmental sector

- a. Strengthen assistive product service mapping across clinical and social sector facilities in the public sector,
- b. Develop mechanisms to ensure access to and availability of assistive products from the national approved list.

(iii) Strengthen person-centeredness within the assistive product service provision

- a. Include user impact, satisfaction surveys, and peer-to-peer training in national guidelines for assistive technology service provision,
- b. Develop follow-up and mobile phone-accessible/online user tracking system or mechanism, including compliance and grievance mechanisms.

(iv) Develop well-connected and coordinated assistive product service provision system

- a. Include assistive technology in referral mechanism within the healthcare systems
- b. Map out referral system for assistive technology across approved clinical and social sector facilities in the public sector;

- c. Conduct on-the-job and refresher trainings for service providers across health, social welfare, and education systems on assistive technology services and referral process

2.9 SWOT Analysis

Following the Ministry's assessment visit to local producers of AT in the 36 States of Nigeria and FCT. The table below summarizes the areas of Strengths, Weaknesses, Opportunities and Threats for local producers of AT in Nigeria.

Strengths	Weaknesses	Opportunities	Threats
<ul style="list-style-type: none"> • Use of simple machines • Adequate support staff • Well trained Staff • Standby Generator Set 	<ul style="list-style-type: none"> • Lack of modern Machines • Lack of capital funding • Lack of financial support • Lack of continuous capacity building programmes 	<ul style="list-style-type: none"> • Production of quality devices • No payment of rent • Government support to boost local production of AT 	<ul style="list-style-type: none"> • Lack of market/ patronage • Erratic power supply • Lack of patronage by government • Labor intensive Production Process • Lack of automated machines

2.10 Opportunities for Collaboration

Support from Government

The Federal Government of Nigeria through FMHADMSD demonstrates strong leadership in policy making in AT notably through the revised 2019 National Policy on Disability in Nigeria. Additionally, its NTWG on AT provides a coordinating platform for stakeholders in the space. After successful collaboration to implement the CCA, FMHADMSD welcomes additional support needed to strengthen its existing coordinating mechanisms and service delivery channels as part of fulfilling its mandate to coordinate rehabilitation service delivery in the country. Government at all levels are also committed to building and strengthening the capacity and institutional knowledge of the FMHADMSD and other government partners in AT especially during the process of laying the groundwork for the establishment of the Commission for Persons with Disability.

Building on previous successful engagements using the CCA process, the Ministry will continue to engage and consult DPOs, AT users' groups and people with disabilities, including, among others:

- Abuja Association of the Deaf;
- Joint National Association of Persons with Disabilities;
- Nigeria Association of the Blind;
- Spinal Cord Injury Association of Nigeria;
- The Albino Foundation;
- Mobility Aid and Appliances Research and Development Centre (MAARDEC);
- Nigerian Prosthetic, Orthotic and Orthopaedic Technology Society (NPOOTS).

These organizations will specifically inform the development of process to systematically identify AT need at the community level and the continuous improvement of the national AT Roadmap through coordination meetings and direct consultations. Across the project, the Ministry will ensure that their perspective is front and centre in the development of plans and policies as well as implementation of activities for increased access to AT.

PART 3: STRATEGIC PRIORITIES, OBJECTIVES AND PROGRAMMES OF THE ROADMAP

3.1 Strategic Priorities

Over the next 5 years, the Federal Ministry of Humanitarian Affairs, Disaster Management and Social Development will drive the following five Strategic Priorities of the Roadmap to Accelerate Local Production of Assistive Technologies/Mobility Aids in Nigeria:

1. Promote Access to Quality AT Services;
2. Promote Partnerships and Networking to Strengthen Access to AT Services and Resources;
3. Policy and Financing;
4. Promote Standardization of AT;
5. Promote Production, Procurement and Distribution of AT.

STRATEGIC PRIORITY 1: Promote Access to Quality AT Services

Strategic Objective 1.1:

- 1.1 Develop a robust, reliable and user-friendly information system of AT products and services.

Strategic Objective 1.1: Develop a robust, reliable and user-friendly information system of AT products and services		
Enabling Actions	Indicators	Target
1.1.1 Map the geographical distribution of persons with disability	Number of LGAs mapped for persons with disability.	774 LGAs
1.1.2 Determine available AT services and need for additional service provision	Number of current available services	36 States & FCT
1.1.3 Develop data and information systems that enable data-driven decision-making and inform stakeholders of in-country AT procurement and service provision	Information disseminated via the Ministry's and Commission's websites	2 government official websites

Strategic Objective 1.2:

1.2 Promote functional referral system among AT Service providers

Strategic Objective 1.2: Promote functional referral system among AT Service providers.		
Enabling Actions	Indicators	Target
1.2.1 Hold a one-day state-level forum among relevant stakeholders (AT providers, Health Service Providers)	Number of State-level meetings held	36 States & FCT
1.2.2 Development of radio jingles for quarterly awareness creation at different levels	Number of radio jingles aired	National, States & FCT
1.2.3 Development of Television jingles for quarterly awareness creation at different levels	Number of Television jingles aired	National, States & FCT
1.2.4 Development of Social Media Platforms for awareness creation at different levels	Number of social media platforms developed	4 social media platforms
1.2.5 Development and Distribution of 74,000 copies of IEC Materials	Number of IEC Material distributed	36 States & FCT
1.2.6 Annual review meetings with relevant stakeholders (AT providers, Health Service Providers, etc)	Number of review meetings held	36 States & FCT

Strategic Objective 1.3:

1.3 Promote innovative approaches to local production of ATs.

Strategic Objective 1.3: Promote innovative approaches to local production of ATs.		
Enabling Actions	Indicators	Target
1.3.1 Hold annual clustered capacity building for local producers of AT	Number of people trained	Six geo-political zones
1.3.2 Conduct annual exchange programme for local producers of AT	Number of exchange programme held	Six geo-political zones
1.3.3 Hold annual national exposition of AT	Number of expositions held	National

STRATEGIC PRIORITY 2: PROMOTE PARTNERSHIPS AND NETWORKING TO STRENGTHEN ACCESS TO AT SERVICES AND RESOURCES

Strategic Objective 2.1:

2.1 Develop effective mechanisms to increase Government commitment at all levels.

Strategic Objective 2.1: Develop effective mechanisms to increase Government commitment at all levels.		
Enabling Actions	Indicators	Target
2.1.1 Develop and implement an inclusive advocacy, communication and social mobilization strategy	Nuber of advocacy programmes carried out	1 strategy document
2.1.2 Engage in quarterly advocacy and lobbying to government		Federal, State and Local Government MDAs
2.1.3 Engage in quarterly advocacy and lobbying to traditional rulers		774 LGs

Strategic Objective 2.2

2.2 Strengthen coordination between Government entities, Institutions, NGOs and network of AT producers to improve partnership and collaboration.

Strategic Objective 2.2: Strengthen coordination between Government entities, Institutions, NGOs and network of AT producers to improve partnership and collaboration.		
Enabling Actions	Indicators	Target
2.2.1 Conduct stakeholders’ forum to facilitate linkages among relevant institutions, funders and NGOs	Number of organizations	Annual
2.2.2 Quarterly meeting of the NTWG to strengthen collaboration among government entities	Number of members in attendance	Quarterly

STRATEGIC PRIORITY 3: POLICY AND FINANCING

Strategic Objective 3.1:

3.1 Develop policy guidelines to promote local production of ATs in Nigeria.

Strategic Objective 3.1: Develop policy guidelines to promote local production of ATs in Nigeria.		
Enabling Actions	Indicators	Target
3.1.1 Constitute service teams for the implementation of the Roadmap	Number of service teams formed	2 teams (M & E and Finance mobilization)
3.1.2 Development and validation of monitoring tools	Number of monitoring tools developed	5 M&E Tools

Strategic Objective 3.2:

3.2 Promote access to funding for AT service providers (producers & suppliers) through linkages/partnership with relevant public and private funding agencies.

Strategic Objective 3.2: Promote access to funding for AT service providers (producers & suppliers) through linkages/partnership with relevant public and private funding agencies.		
Enabling Actions	Indicators	Target
3.2.1 Identify innovative and sustainable financing mechanisms for AT procurement and provision	Amount of funding raised annually	N1b
3.2.2 Review national and state health insurance schemes for opportunities to expand AT provision coverage using cost lens and benefits optimization	Number of schemes reviewed	Federal and State Governments
3.2.3 Coordinate government and partners to provide subsidy on procurement and distribution of AT	Amount of subsidy facilitated	N100m
3.2.4 Build capacities of FMHADMSD, NCPWD and service providers in fund raising and project development towards accessing institutional funding opportunities (EU, DFID, DFAT, etc)	Number of persons trained	100 persons

STRATEGIC PRIORITY 4: PROMOTE STANDARDIZATION OF AT

Strategic Objectives 4.1:

4.1 Develop a National quality standard, regulations and technical specification for AT devices, equipment and components.

Strategic Objective 4.1: Develop a National quality standards, regulations and technical specification for AT devices, equipment and components.		
Enabling Actions	Indicators	Target
4.1.1 Develop National Quality Standards for AT devices	Number quality standards developed per AT	10 AT per cluster
4.1.2 Meetings of the Technical Committee to develop National Standards for ATs in Nigeria	Number of meetings held	AT stakeholders in Nigeria
4.1.3 Meet with relevant professional bodies and MDAs to design or review (if already in existence) quality standard guidelines for AT	Number of meetings held	National level, 36 States and the FCT
4.1.4 Publication and dissemination of the developed National Standards for ATs in Nigeria	Copies of the developed National Standards for ATs disseminated	All ATs for PWDs in Nigeria
4.1.5 Build the capacity of the producers to meet the required quality standard	Number of producers trained	Producers in 36 States and the FCT
4.1.6 Mid-term (2.5years) review of the developed National Standards for ATs in Nigeria	Updated copy of the reviewed National Standards	All new ATs within the period

Strategic Objectives 4.2:

4.2 Promote AT research, evidence and learning.

Strategic Objective 4.2: Promote AT research, evidence and learning.		
Enabling Actions	Indicators	Target
4.2.1 Establish rapport with research and learning institutions	Number of research and learning Institutions engaged	5 research institutes

4.2.2 Advocate for AT Research Fund in Nigeria	AT Research Fund established	National and state levels
4.2.3 Grants to local producers of ATs in Nigeria	Amounts given annually and Number of Beneficiaries	N50m

Strategic Objectives 4.3:

4.3 Promote capacity building of AT service providers to improve service delivery.

Strategic Objective 4.3: Promote capacity building of AT service providers to improve service delivery.		
Enabling Actions	Indicators	Target
4.3.1 Liaise with the Nigerian Prosthetic, Orthotic, and Orthopedic Technology Society (NPOOTS); Medical rehabilitation therapist Board of Nigeria; and Nigeria Society of Physiotherapy to strengthen professional / industry-related skills of AT producers.	Number of AT professionals and technicians trained.	370 (10 per State and FCT)
4.3.2 Capacity building for local producers of ATs in Nigeria	Number of such capacity buildings per year	Local producers of ATs in Nigeria

Strategic Objectives 4.4:

4.4 Promote innovative information, technology, and communication solutions to implement programs.

Strategic Objective 4.4: Promote innovative information, technology, and communication solutions to implement programs.		
Enabling Actions	Indicators	Target
4.4.1 Develop online reporting and feedback mechanisms	Development of online reporting platform	1 Platform
4.4.2 Develop and use Google forms for periodic surveys to obtain necessary information and feedback from stakeholders	Number of completed Google forms received from stakeholders	Bi-annual surveys

4.4.3 Develop a digital platform for information sharing among stakeholders	The platform developed	All stakeholders
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STRATEGIC PRIORITY 5: PRODUCTS AND PROCUREMENT

Strategic Objective 5.1:

5.1 Develop clear policy guidelines, as it relates to AT purchasing and procurement process.

Strategic Objective 5.1: Develop clear policy guidelines, as it relates to AT purchasing and procurement process.		
Enabling Actions	Indicators	Target
5.1.1 Meet with relevant professional bodies and MDAs to design or review (if already in existence) purchasing and procurement guidelines for AT.	Number of meetings held with relevant stakeholders	National level, 36 States and the FCT
5.1.2 Hold a zonal training of procurement officers on procurement of AT	Number of procurement officers trained	370 (10 per state & FCT)
5.1.3 Produce and disseminate developed guidelines	Copies of the developed guidelines	5000 copies

Strategic Objective 5.2:

5.2 Promote tax exemption on import duties for AT related goods and services.

Strategic Objective 5.2: Promote tax exemption on import duties for AT related goods and services.		
Enabling Actions	Indicators	Target
5.2.1 Hold interactive sessions with the tax authorities, Nigeria Customs Service to facilitate import duty exemptions for AT goods and services	Number of interactive sessions held	5 interactive sessions
5.2.2 Implement advocacy and lobbying with legislators to facilitate import duty exemptions for AT goods and services	Number of advocacy had	5 advocacy visits

3.2 What Risks Affect the Strategy?

The possible risks that can threaten the implementation of the strategy are as follows:

- a. Liquidity Risk – The risk that funds will not be made available as and when due to meet obligations as they fall due in the programme implementation.
- b. Procurement Risk – The risk that a wrong AT will be procured for a PWD and the possibility that a wrong producer is engaged to develop certain ATs that are not directly their area of core competence, or the wrong procurement approach or channel is used.
- c. Design Risk – The risk that there will be an error in the design of AT, thereby not making the AT fit for purpose;
- d. Compliance Risk – The risk that other organizations whose mandate relate to PWDs will comply with the Roadmap holistically.
- e. Security Risk – The risk associated with insecurity of lives and prosperity considering the security situation of the country and globally at the moment.
- f. Change Management Risk – The risk that users of AT will have some lag time in trying to adjust to their new AT and the stakeholders getting used to standardized Production, Procurement and distribution of AT.
- g. Programme/Project Risk – The risk that project management strategies will not be applied or implemented to actualise the Roadmap.

3.3 How the Change will be Monitored and Evaluated

The change will be monitored and evaluated by taking the following chronological steps:

- a. Identify Programme Strategic Objectives
- b. Define Indicators
- c. Collect Data
- d. Define Roles and Responsibilities for M&E
- e. Create Reporting Template
- f. Plan for Dissemination and Effective Communication of Results to Stakeholders.

3.4 Conclusion

Certainly, we believe local production of Assistive Technologies for Persons with Disabilities is a step in the right direction for us as a Nation and that the Standardization of the Production, Procurement and Distribution of Assistive Technologies in Nigeria will ultimately secure better lives for PWDs.

Hence, all stakeholders are expected to give maximum support to the actualization of this Roadmap and other policies of Government designed to ease the challenges of people with special needs.

