

# Disability and Assistive Technologies: Opportunities and Challenges



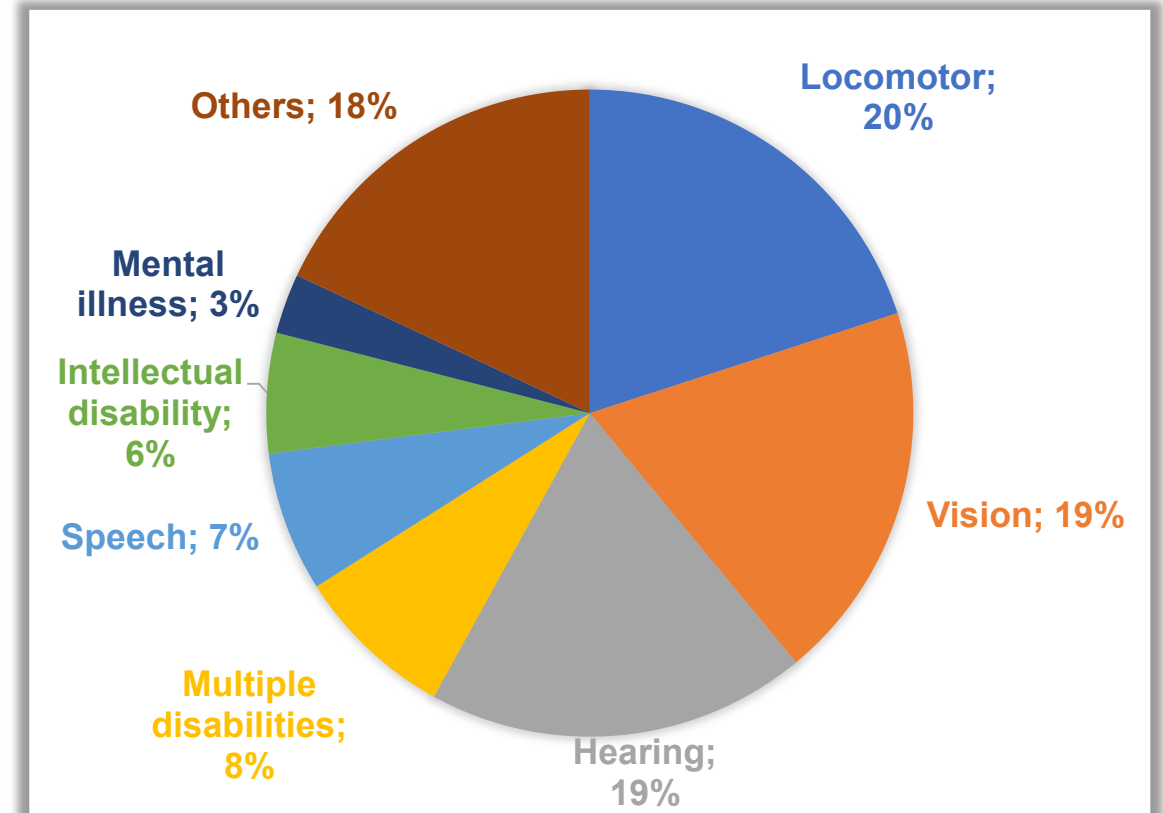
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# Disability Landscape in India

India is home for about 90-130mn persons with disability, that is 7-10% of the total population



Source: Dalberg report, National Statistics Office

'Others' include Parkinson's disease, blood disorders such as haemophilia, thalassemia, and sickle cell, acid attack victims etc.

# Overview - Disability Healthcare and Assistive Technologies

Need may be **temporary, permanent, or inevitable with aging** as life expectancy increases

## Disability Healthcare (DH)



**Prevention and Screening** – prevention, right diagnosis and early intervention



**Rehabilitation** – extended therapy for functional independence, physical, occupational and psychological



**Equipment** – development, delivery and usage of appropriate equipment for imparting proper therapy in **rehab setting**

## Assistive Technologies (AT)



**Assistive devices** – design, development and delivery of devices for day-day activities in **community setting**



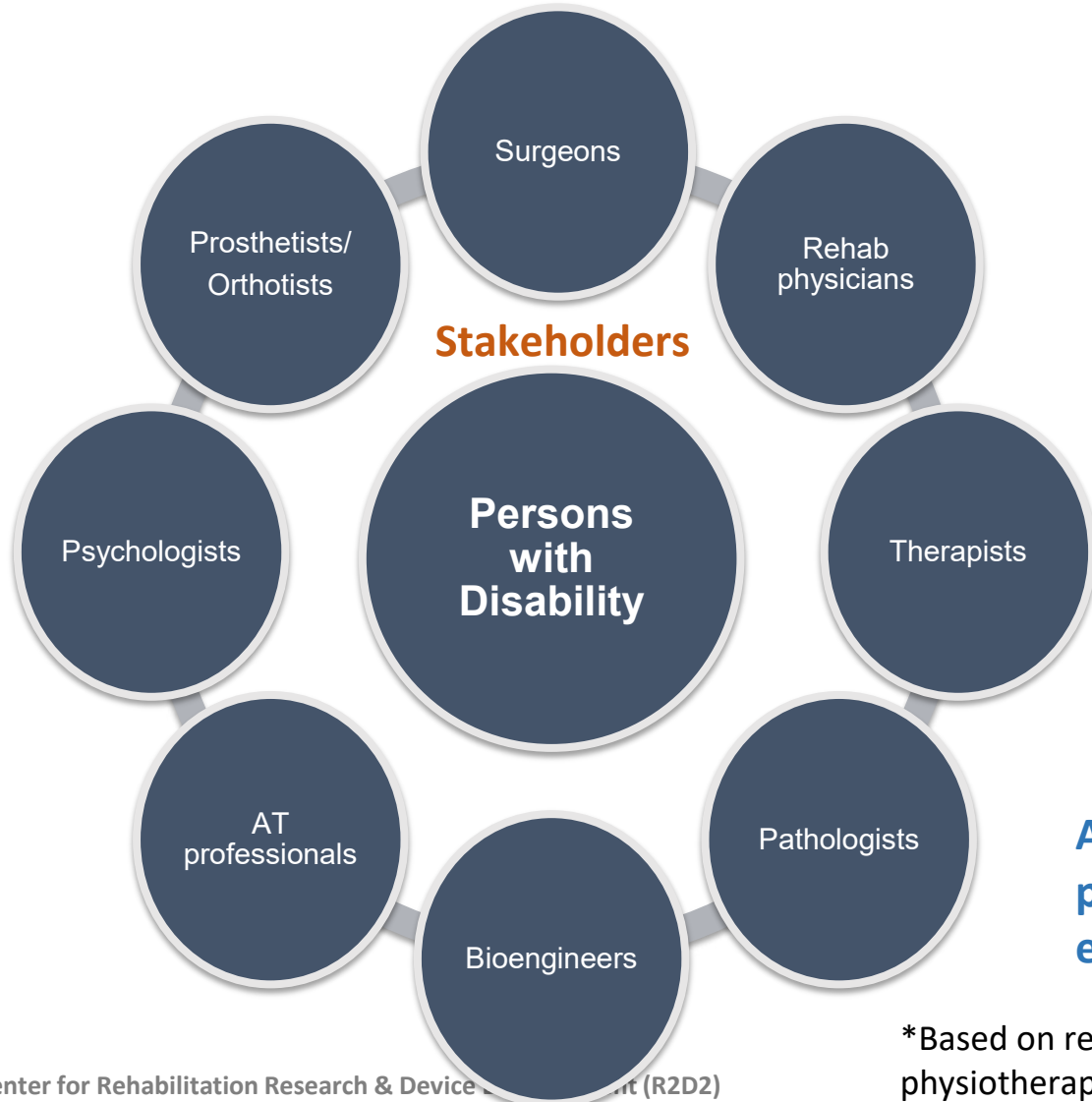
**User training** – educating the users on appropriate choice and usage of devices



**Professionals training** – train professionals to assess and prescribe appropriate devices for the users

# Disability Healthcare – Challenges and Gaps

The WHO estimates that in some low- and middle-income countries, more than 50% of people do not receive the rehabilitation services they require



## Key Challenges



Affordability



Access



Awareness



Acceptance

According to a report published by The Lancet in 2020, 411mn people in India need rehabilitation services in some form. However, estimated number of rehab professionals are less than 0.2mn\*

\*Based on registered members with Rehabilitation Council of India, national association for physiotherapists and research report on occupational therapy in India

# Assistive Technology – Landscape and Challenges

The WHO estimates that over 90% of PwD worldwide lack access to appropriate AT and the situation in countries like India is worse

## Two Extremes of AT in India



- Primitive
- One-size-fits-all
- Cheap
- High user rejection
- Social stigma
- Distributed by NGOs/government agencies



- Sophisticated & customizable
- Imported
- Very expensive
- No after sales service
- Out of reach for majority
- Not suitable in some cases

## Key Challenges



**Low purchasing power:** Lack of livelihood, plus health insurance plans often do not cover purchase of assistive devices



**Delivery/distribution systems:** Donation model focus is on quantity over quality leading to devices being forced upon beneficiaries



**Lack of awareness:** Both users and professionals seldom know about nor demand appropriate devices



**Fragmented market:** Need for customization adds cost, supply chain and inventory issues; industries not keen on entering this market



# Assistive Technology – Opportunities

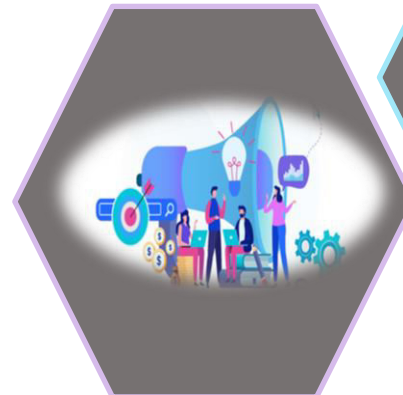
Assistive technologies (AT) are required to **compensate for loss of function, reduce dependence on caregivers, prevent secondary health complications, and fight poverty** by enabling education and livelihood opportunities for persons with disability (PwD)



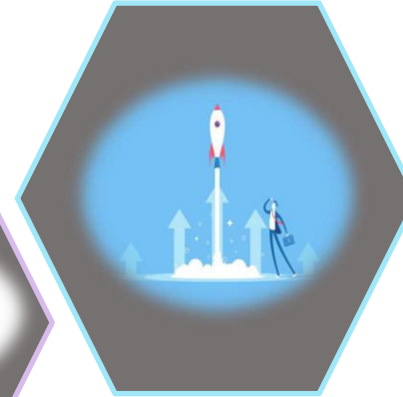
**AT ecosystem:**  
Transforming the AT landscape, making India a world leader and changing the disability narrative



**Fuel innovation:**  
Across business, distribution and end-user levels



**Partnership:**  
Extensive public-private-NGO partnerships for last mile delivery



**Enable startups:**  
Especially hardware startups with shared R&D resources for manufacturing and design, and deliverable based funding

Rising requirements for the aging population must help **bring DH & AT under the aegis of general healthcare** with the associated benefits of insurance schemes, a larger market base, and increased involvement of the public healthcare system at all levels

# AT Best Practices | Takeaways for Governance



Systemic changes and **strong all-round AT policies (for R&D, manufacturing, delivery and awareness)** alone can make sustainable, meaningful impact among PwD and aging population, and push India to become a world leader in AT

## Product Development

### Goal: Inclusive innovation

- AT innovation hubs for access to **shared R&D, manufacturing, testing and logistics** resources
- Access to **earmarked grants/funds on a deliverable-based approach** with focus on impact
- Help startups/companies **overcome valley-of-death by bridging the need-demand gap** – clearly there is need but no income in the user population
- AT specific accelerators with an aim to **design in India, make for the world**

## Delivery

### Goal: Access for all

- Move away from pre-set list of AT to **user-chosen device** either through credit coupons/**direct benefit transfer or government/private health insurance**
- Emphasize on **quality over quantity**
- Make **impact assessment mandatory** for any device give-away (by a third party agency with AT expertise)
- Provide platforms for **open source AT innovations** and necessary support to follow through

## Awareness

### Goal: Empowered user community

- Upskill designers and users to embrace **user-centric design** philosophy
- **Skills lab** for user community to enable AT choice, usage and troubleshooting
- **Workshops for professionals** to create awareness about AT, training for assessments and prescription generation

Thank you!

**Indigenous Inclusive Affordable Healthcare and AT by 2030**

**A Global Leader by 2047**

**Leaving no one behind**



**Affordable**



**Accessible**



**Awareness**



**Acceptance**