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Global Disability Innovation Hub

GDI Hub Accelerate

Unlocking Investment in Assistive Technology: Blended Finance and the Path to Market Scale

Global Disability Innovation Hub

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From Innovation to Market Systems

Over the past decade, the assistive technology (AT) ecosystem has undergone a quiet transformation. Through programmes such as AT2030, funded by the UK Foreign, Commonwealth & Development Office (FCDO), the Global Disability Innovation Hub (GDI Hub) and its partners have supported hundreds of innovators, researchers, and organisations working to expand access to assistive products worldwide.

This work has demonstrated a critical insight: the challenge facing AT is no longer primarily one of invention. Innovators across the world are already developing promising solutions: from affordable eyeglasses and digital interpretation platforms to new mobility technologies and inclusive digital tools. What remains missing are the market systems capable of scaling these solutions to reach the millions of people who need them.

AT should be understood not as a niche social sector, but as essential social and economic infrastructure. Just as transport, energy, and digital connectivity enable people to work, learn, and engage in markets, AT enables access to education systems, labour markets, healthcare, and civic life for a rapidly growing share of the global population. When this infrastructure is missing or under-invested, the result is not only social exclusion, but lost productivity, increased dependency, and avoidable public expenditure.

This report focuses on that missing layer. While many initiatives support early-stage innovation, far fewer address the structural barriers that prevent AT ventures from reaching scale: financing gaps, fragmented procurement systems, regulatory complexity, and limited investor understanding.

Unlocking Investment in Assistive Technology examines how these systemic barriers can be addressed, and how blended finance models can help mobilise the capital needed to build a functioning global market for AT. It is part of a broader body of work by GDI Hub, spanning research, venture development, financing, and market systems, aimed at supporting governments, investors, and innovators to scale access globally.

AT2030: Building the Innovation Pipeline

The AT2030 programme, funded by FCDO, has supported a global portfolio of AT innovation, research, and ecosystem development. Over the past decade, this work has helped to:

- Support more than 150 AT ventures
- Generate evidence on access, markets, and user needs
- Strengthen local innovation ecosystems in multiple regions
- Advance the global agenda on AT access

As the ecosystem matures, a growing number of ventures are reaching the stage where scaling becomes possible, but capital and market infrastructure remain limited. This report focuses on the financial and systemic mechanisms required to bridge that gap.

Executive Summary

The Opportunity in Plain Sight

Assistive technology (AT) includes products such as wheelchairs, hearing devices, glasses, and communication tools that enable persons with disabilities, older adults, and other people with additional support needs to participate fully in society.

Today, more than 2.5 billion people worldwide need at least one assistive product, yet fewer than one in seven can access it. In some low- and middle-income countries, access falls as low as 3%. By 2050, global need is projected to reach 3.5 billion people.

Innovators across the world are already building effective assistive technologies. The challenge is not a lack of solutions or demand, but the absence of the financial structures needed to bring these solutions to scale.

This report makes four core arguments:

- **The scale of unmet AT need represents a major market failure.** Billions of people lack access to technologies that enable education, employment, independence, and participation.
- **Capital has not flowed to the sector because of structural barriers.** AT sits between investment categories, financing instruments, and stages of venture support.
- **Blended finance provides a viable solution.** Combining philanthropic, public, and private capital can reduce risk for investors while supporting ventures to scale.
- **The timing is right.** A pipeline of growth-ready ventures now exists, regulatory momentum around accessibility is increasing, and technological advances are improving the economics of AT solutions.

Evidence Base

This report draws on ten years of research by the GDI Hub and engagement with AT ventures worldwide, including direct support to more than 150 ventures and an in-depth assessment of more than 50 growth-stage enterprises. It presents practical recommendations for philanthropic funders, impact investors, development finance institutions, governments, and ecosystem builders seeking to expand access to AT globally.

The pipeline exists, the mechanisms are available, and the opportunity to build a functioning global market for AT is within reach.

Key statistics drawn from WHO and UNICEF (2022); WHO (2023); ATscale (2023); and World Bank (2021).

Contents

Part One:

The Problem

A Billion People. A Market Failing Them.

More than 2.5 billion people worldwide need assistive technology (AT) and, in most cases, do not have access to it.

This gap is not the result of insufficient innovation. Founders across the world are building AT that works, often shaped by direct experience of disability and close proximity to the problem. Nor is it the result of insufficient demand. The need for AT is large, well-documented, and growing as populations age and the prevalence of chronic conditions increases.

The challenge lies elsewhere: the systems that finance and scale innovation have not been designed with AT in mind. As a result, many promising solutions struggle to reach the people who need them.

This section outlines the scale of unmet need, why AT matters economically and socially, and why investment in the sector has remained limited despite clear demand.

The Scale of Unmet Need

AT is often misunderstood as a niche category of specialised products. In reality, it functions as essential infrastructure for participation, enabling people to learn, work, communicate, and live independently.

AT spans products from mobility devices and vision correction to digital communication tools and AI-enabled accessibility technologies. What unites these products is their role in enabling persons with disabilities, older adults, and people with temporary or age-related impairments to participate more fully in economic and civic life.

2.5 billion

people worldwide **currently need at least one assistive product.** By 2050, this is projected to rise to 3.5 billion as populations age and non-communicable disease increases.

~5–15%

the proportion of **people who need AT who can access it globally**. In some low- and middle-income countries, access falls as low as 3%.

~80%

of persons with disabilities live in low- and middle-income countries, where the gap between need and provision is widest.

5%

As few as 5% of **people who require a wheelchair in low- and middle-income countries have access to one**. The comparable figure in high-income countries is estimated to be as high as 90%.

Sources: WHO and UNICEF (2022); WHO (2022); WHO (2023); ATscale (2023)

Why Assistive Technology Matters:

Social and Economic Impact

Access to AT determines whether millions of people can participate in everyday life. Education, employment, communication, and independent living often depend on access to appropriate assistive tools (WHO and UNICEF, 2022). A child who cannot see cannot fully participate in school regardless of teaching quality. An adult who cannot communicate effectively faces significant barriers to employment (World Bank, 2021).

For this reason, AT often functions as an enabling layer for other social investments. Improvements in education systems, labour markets, and healthcare services cannot reach large segments of the population if people lack the tools needed to access them.

When AT enables people to work, it increases labour market participation and tax contributions while reducing reliance on welfare systems. When it supports access to education, it helps build future workforces. Technologies that enable independent living can delay hospitalisation and reduce long-term care costs. These benefits accumulate across individuals, households, and national economies (WHO, 2022; World Bank, 2021).

At the same time, disabled people and their networks represent one of the largest and most consistently overlooked consumer markets in the world. The “disability economy” is estimated to account for more than $13 trillion in annual disposable income globally (Return on Disability Group, 2020). Despite this scale, markets have historically underinvested in products and services designed for this population.

The Market Failure: Why Capital Has Not Followed Need

The gap in financing for AT reflects a set of conditions that have made the sector difficult for investors to identify, evaluate, and support. These dynamics, including limited data, unfamiliar business models, and weak market signals, have been observed in broader disability-focused investment efforts (IFC, 2024). Understanding the barriers is essential to designing financial mechanisms capable of overcoming them.

The Investment Landscape

Investment in AT has not been entirely absent. Between 2018 and 2024, cumulative equity investment reached approximately $7.8 billion across around 1,179 ventures (Tracxn, 2024).

However, this investment has been volatile and structurally uneven. Funding declined at a –12% three-year CAGR and –7% five-year CAGR through to 2024, reflecting an ecosystem that is scaling in activity but still maturing in capital architecture (Tracxn, 2024).

This decline does not reflect weakening demand or a lack of promising ventures. Instead, it reflects the fragility of the ecosystem around them. When pandemic-driven momentum faded, the sector lacked the institutional infrastructure needed to sustain capital flows: specialist investors, shared risk mechanisms, and established pathways for ventures to grow and exit.

Without these foundations, investment in AT has remained episodic rather than sustained.

Institutional Gaps: Why the Ecosystem Has Not Matured

Sectors that attract sustained private investment share a common foundation: investors understand the sector, can assess risk and return, recognise potential exit pathways, and have access to specialised expertise.

In AT, many of these foundations remain underdeveloped.

A major challenge is recognition. AT often fails to appear within the categories investors use to organise deal flow. Even impact investors with explicit inclusion mandates frequently omit disability from their frameworks. As a result, AT is rarely evaluated as a coherent investment category.

Other sectors have developed infrastructure that helps make opportunities visible to capital. Biotechnology benefits from established acquisition pathways through pharmaceutical companies. Climate investment relies on tools such as carbon accounting and green bond standards. Gender-lens investing has developed standardised metrics that allow investors to assess impact across portfolios.

AT lacks comparable structures, including clear exit pathways, shared measurement standards, and sector benchmarks. Without these tools, many investors struggle to evaluate opportunities in the sector.

The Missing Middle

Even when investors engage with AT, another barrier emerges: the “missing middle.” This term refers to the gap between early-stage grant funding and the larger commercial investments required for companies to scale.

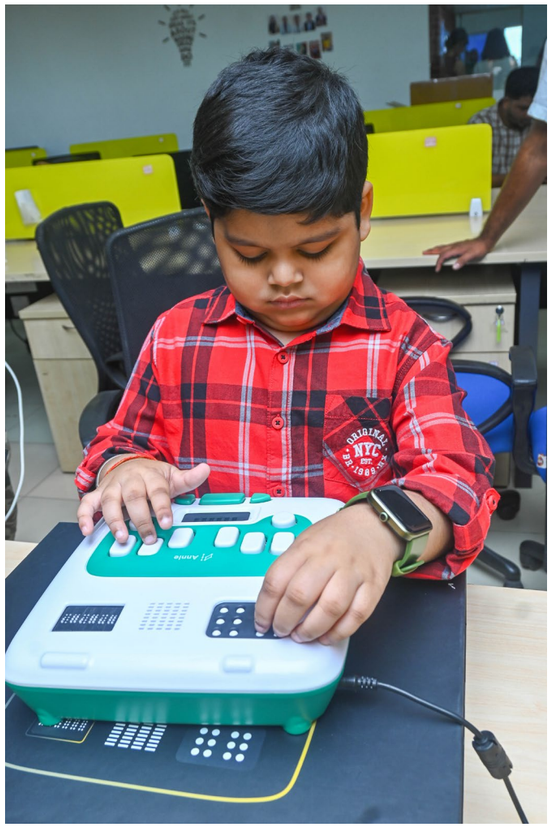
Many AT ventures receive early support through grants, accelerators, and public-sector pilots. These programmes help develop prototypes and demonstrate early demand. The challenge arises when ventures are ready to grow.

Scaling requires capital for manufacturing, regulatory compliance, market expansion, and team development. Many AT enterprises that have already demonstrated commercial traction, with products in market, paying customers, and early revenue, still typically require between $50,000 and $2 million to reach their next stage of growth. This is too large for grant programmes and accelerators designed for early experimentation, but too small and too unfamiliar for conventional venture capital seeking larger cheque sizes and clearer exit trajectories. As a result, promising enterprises frequently fall into a financing gap that slows or prevents their expansion.

Growth-stage enterprises, those moving from proof-of-concept into operational and geographic scale, also require targeted support navigating regulatory approval, building distribution partnerships, and generating the structured evidence that institutional buyers and investors require. Yet specialised support at this stage of development remains limited. Most incubation and acceleration programmes focus on earlier phases of the innovation journey, leaving founders of more mature enterprises to navigate these challenges largely on their own.

$500K–$2M

The typical funding range where most growth-stage AT ventures operate: too large for grants and accelerators, too small and too unfamiliar for conventional commercial capital. This is the missing middle.



Growth-stage AT ventures often have working products and clear demand, but need flexible capital and support to move from early traction to scale.

Why Existing Approaches Don’t Work Alone

The missing middle persists not because any single funding instrument is flawed, but because each was designed for a different purpose.

Grants and philanthropy have played a critical role in early-stage AT innovation, funding pilots, prototypes, and proof-of-concept work that helped build the current pipeline of ventures. However, grants are typically short-term and designed to support experimentation rather than sustained growth. They can bring ventures to the starting line, but are often not designed nor equipped to support the transition to scale.

Commercial venture capital operates under different constraints. Investors typically seek clear exit pathways, predictable and higher financial returns, and time horizons of five to seven years. Many AT ventures, particularly those serving lower-income markets, generate value over longer periods and in ways that are not easily captured by conventional financial models.

Development finance institution (DFI) lending faces another mismatch. Most growth-stage AT ventures lack the predictable cash flows required for debt repayment, while DFI investment thresholds are often designed for larger, more established organisations.

Government procurement can provide a pathway to scale, particularly in LMIC contexts where public systems are major purchasers of assistive products. In practice, however, procurement processes are often fragmented, slow, and politically variable, making them difficult to rely on as a primary driver of venture growth.

None of these instruments should be abandoned. Each plays a role. What is missing is a structure that brings them together, sequencing different forms of capital, sharing risk across actors, and combining funding with the support ventures need to grow. The next section explores how blended finance can provide that structure.

Part Two:

What the Evidence Shows

What We Have Learned: Evidence from the Field

Ten years of engagement with more than 150 AT ventures across multiple regions reveals a consistent set of structural barriers and the conditions under which ventures have been able to overcome them.

The Dominant Constraint: Market Access, Not Technology

Across the ventures we have engaged with, the main constraint on growth is not the technology itself but the lack of a reliable pathway to market. The systems through which AT reaches users are fragmented and difficult to navigate. Procurement cycles can take years, reimbursement frameworks are slow to adapt, and distribution networks frequently fail to reach rural or lower-income communities where need is greatest.

The ventures that progress most successfully tend to identify one workable route to market, such as a specific procurement system or institutional partnership, and focus on making that pathway reliable before attempting broader expansion.

SHONAQUIP: AT as a System, Not a Product

Shonaquip designs and manufactures posture and mobility devices in South Africa, built for local conditions and designed to be repairable over time. But distribution alone has never been their model. Thirty years of experience delivering AT in under-resourced settings has shown that devices without clinical assessment, fitting, training, and follow-up get abandoned. Their approach treats market access as a systems problem: one that requires procurement reform, trained workforces, and service infrastructure to solve.

Shonaquip shows that assistive technology is not only a product challenge.

Evidence Is a Growth Engine

In emerging sectors such as AT, evidence functions as market infrastructure, a translation layer that allows lived experience, user outcomes, and social value to be recognised within capital allocation and procurement systems. Without shared approaches to generating and interpreting this evidence, impact remains visible at the community level but invisible to the institutions that control large-scale investment and purchasing decisions. Strengthening this evidence layer is therefore not an evaluation exercise alone, but a prerequisite for market formation.

The data that AT ventures naturally generate, on usability, accessibility outcomes, and user experience, is highly relevant to the communities they serve. Investors and procurement authorities, however, typically look for different signals: revenue trajectories, cost-effectiveness, avoided healthcare costs, or comparisons with similar funded ventures. Producing this type of evidence requires structured analysis and resources that many early- and growth-stage AT ventures have not yet had the capacity to develop.

This challenge is compounded by the limited inclusion of disability within mainstream impact measurement frameworks. ESG standards, impact investing tools such as IRIS+, and national innovation reporting systems frequently track indicators related to gender, ethnicity, or income, but rarely disability in relation to innovation performance or market development.

Addressing this gap, through shared metrics, standardised frameworks, and deliberate inclusion of disability in mainstream impact measurement, is therefore as much a market-building exercise as a measurement one.

SynPhNe: Making the Economic Case Explicit

SynPhNe's neurorehabilitation platform uses real-time brain and muscle signals to personalise stroke recovery therapy. Rather than framing outcomes in clinical terms alone, SynPhNe began documenting caregiver hours saved alongside patient recovery data. That reframing, from therapy performance to total cost of care, speaks directly to how ministries and payers make purchasing decisions. Positioning AT impact in economic terms, such as productivity gained, dependency reduced, costs avoided, is often what moves it from interesting to procurable.

SynPhNe guides patients through structured rehabilitation at home, extending clinical reach beyond the specialist setting.

Capital Structure Mismatch

Most growth-stage AT ventures are not well suited to debt financing. Revenue streams are often irregular, unit economics are still evolving, and procurement-driven markets create long payment cycles. These conditions make fixed repayment schedules difficult to sustain.

Instead, many ventures require patient equity: capital that shares the risks of the growth phase and allows time for markets to develop. In parallel, many AT ventures lack the financial structures and documentation that conventional growth investors expect. Detailed financial models, investor-ready narratives, and comprehensive data rooms often require specialised support that is largely absent within the sector. As a result, investors struggle to evaluate ventures effectively, while ventures struggle to present themselves in ways investors recognise.

PARTICIPANT ASSISTIVE PRODUCTS: The Working Capital Gap

Participant makes affordable, durable wheelchairs for a global audience, with established distribution throughout Africa and growing presence in Europe and Asia. Their plan to scale manufacturing to 20,000 units per year is credible and costed, and requires working capital for tooling and manufacturing expansion: patient capital that can absorb the lag between upfront investment and downstream revenue. That kind of capital is rarely available to enterprises at this stage, and its absence is what keeps otherwise viable businesses from scaling.

What Works: Proven Pathways to Scale

Mainstream positioning and universal design

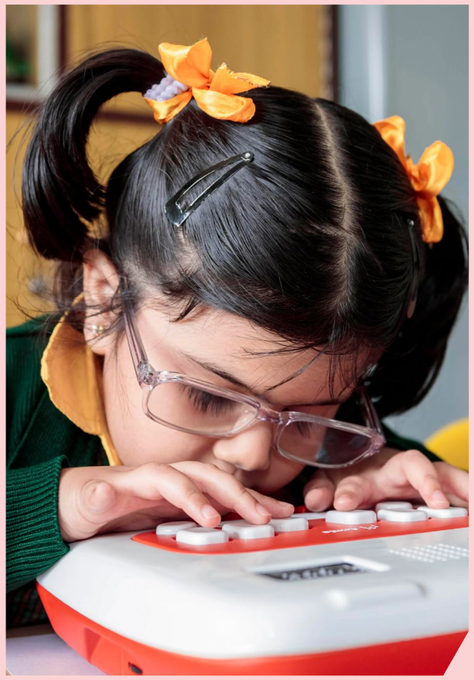
Ventures that position their products within broader categories such as ageing, digital health, or productivity technologies often access larger markets and more familiar investment logic than those framed solely around disability. This is not about hiding the mission. It is about ensuring that the solution appears within the categories investors and buyers already use to organise demand. The ventures that do this well lead with the market opportunity, while allowing the disability impact to be demonstrated through outcomes.

B2B and institutional adoption

Ventures that sell to hospitals, governments, corporations, or school systems often achieve more stable growth than those relying primarily on individual consumers. In many markets, the people who most need AT also have the least purchasing power. Institutional buyers change that equation by providing larger contracts, more predictable revenue, and the kind of recurring income structure that growth investors recognise. They also provide a form of market validation that individual user sales cannot easily replicate.

THINKERBELL LABS: Why Institutional Channels Change the Equation

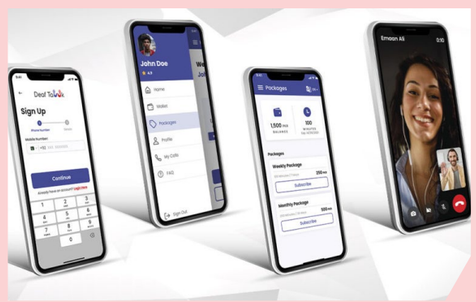
Thinkerbell's Annie device supports Braille learning and foundational literacy for blind and visually impaired children without requiring a specialist teacher to be present. Rather than relying on individual sales, Thinkerbell built its footprint through schools, NGOs, and government programmes, reaching 10,000+ children across 300+ centres in 26 Indian states. A partnership with the American Printing House extended the model to the US, where the first shipment sold out in under ten days. Institutional buyers provided volume, but also the market validation that individual consumer sales rarely can.



Thinkerbell's Annie device shows how assistive technology can reduce dependence on scarce specialist teaching capacity.

DEAFTAWK: Turning Compliance Into a Commercial Channel

For Deaf people, access to real-time sign language interpretation should not depend on advance booking or geography. Whether the need is a healthcare appointment, a workplace meeting, or a public service interaction, DeafTawk provides on-demand interpretation via HD video in around 30 seconds, across multiple sign languages. The commercial model reflects a core B2B insight: employers, institutions, and public service providers increasingly need to meet inclusion and accessibility obligations, and DeafTawk converts that compliance pressure into a recurring revenue channel. That model has already proven transferable across very different markets, from Pakistan and Sri Lanka to Denmark and the US, with each offering a distinct mix of regulatory drivers, employer demand, and public service requirements. Human interpretation currently drives around 90% of revenue, a strong traction signal, while AI-enabled sign-to-text capability is being built to extend reach as demand grows.



DeafTawk turns access to sign language interpretation into a scalable service model.

Structured internationalisation

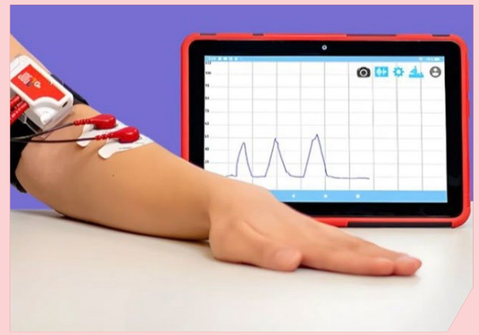
Many of the ventures with the strongest commercial fundamentals operate in both high-income and lower-income markets, but with distinct strategies in each. High-income markets typically generate the margins that support financial sustainability, while lower-income markets deliver impact by expanding access to underserved populations. Ventures that keep these models clear are better able to present a coherent commercial case to investors while maintaining a strong mission. Those that try to apply a single model across very different markets often struggle to achieve either.

AI-enabled scalability

Many assistive services have historically depended on expensive specialist labour, including interpreters, clinicians, and therapists. Artificial intelligence is beginning to change this by extending the reach of human expertise: automating tasks that can be standardised while allowing specialists to focus on the areas where human judgement remains essential. For investors, this improves unit economics and scalability. For users, particularly in settings where specialist capacity is limited, it can significantly expand access.

JOGO HEALTH: When Technology Extends Specialist Reach

JOGO Health combines wearable muscle sensors with software-guided therapy, allowing patients with chronic pain and neuromuscular conditions to receive personalised rehabilitation outside specialist clinics. Clinicians monitor and adjust treatment remotely. The commercial case improves as AI reduces the ratio of specialist time to patient outcomes: more people reached, at lower cost per session, without reducing clinical quality. That shift in unit economics is what makes the category increasingly legible to investors.



JOGO Health shows how digital rehabilitation can extend specialist clinical support beyond conventional settings

Learnings from Capital Deployment in AT

Through several years of supporting and investing in AT ventures, GDI Hub has observed a set of recurring principles that shape what effective financing mechanisms in this sector must get right.

Start with thesis, not structure

The most important decisions about a fund investing into AT are strategic, not operational. A mechanism must first define the gap it is designed to address, the ventures it intends to support, and the theory of change that connects capital to outcomes. In the AT sector this means being explicit about where the mechanism sits along the capital continuum, which stage of ventures it targets, and how funding is combined with other forms of support.

Capital without support is insufficient

The interventions that appeared the most effective combined investment with targeted expertise. This was not generic mentorship, but specialised support addressing specific barriers, such as regulatory pathways, distribution partnerships, or structuring the evidence required by institutional buyers.

Build flexibility into funding structures

AT ventures operate in complex and evolving environments. Milestone-based funding structures that allow adjustments as ventures develop consistently performed better than rigid investment frameworks. Flexibility is therefore a design requirement rather than a concession.

Activate the ecosystem around each investment

Capital deployed alongside a network of co-investors, procurement partners, and clinical validation institutions creates significantly more value than capital deployed in isolation. Each investment can function as an activation point for a broader ecosystem of relationships.

Invest in storytelling

A mechanism's ability to attract strong ventures and co-investors depends in part on how clearly it communicates its purpose and impact. Impact is rarely self-evident in emerging sectors. It must be articulated clearly and consistently for different audiences.

Part Three:

The Solution

Blended Finance: The Architecture the Sector Has Been Missing

Addressing the barriers described above requires a financial structure designed for sectors where markets are still developing. Blended finance provides such a mechanism.

What Blended Finance Is and Why It Fits

Blended finance refers to the strategic combination of philanthropic, public, and private capital within a single investment structure. Concessional capital, such as grants or first-loss funding, is used to reduce risk and enable participation from investors who would otherwise not engage in the sector.

In practice, capital is structured in layers. A first-loss layer absorbs initial losses and protects other investors. A second layer, often provided by development finance institutions or impact investors, accepts lower returns in exchange for reduced risk. A senior layer targets market-rate returns and attracts commercial capital. This structure allows different types of capital to participate according to their risk tolerance, while collectively enabling investment that would not occur otherwise.

Blended finance mechanisms often operate alongside targeted support that helps ventures address barriers beyond capital, including regulatory navigation, distribution partnerships, and the generation of evidence required by institutional buyers and investors. This combination of capital and capability-building reflects established practice in blended finance, where technical assistance plays a central role in enabling investment in emerging markets (OECD, 2020). In the AT sector, this support is typically delivered by ecosystem actors such as GDI Hub and its partners.

For AT, this model aligns with the underlying constraints of the market. Investment is limited not only by risk, but by fragmented demand, long timelines to scale, and the need for system-level change across procurement, regulation, and distribution. Blended finance responds to these conditions by combining risk-sharing with the operational support required for ventures to grow.

In this context, blended finance is not simply a financing tool, but a mechanism for enabling market development.

How Blended Finance Has Worked Elsewhere

Blended finance has been used successfully in sectors facing similar barriers, including global health, climate, and agriculture. Across these sectors, it has mobilised more than $213 billion in development finance (Convergence, 2024).

- **Global health - The Global Fund:** The Global Fund combines philanthropic, governmental, and private capital to support large-scale health interventions. By anchoring investment with public and philanthropic funding, it has mobilised substantial resources while strengthening national health systems (The Global Fund, 2023).
- **Climate - The Green Climate Fund:** The Green Climate Fund has catalysed large-scale renewable energy investment in emerging markets using concessional financing and risk-sharing structures that reduced the perceived risks of early projects (Green Climate Fund, 2023).
- **Agriculture - The Africa Agriculture and Trade Investment Fund:** AATIF mobilised private investment in agricultural value chains serving more than 250,000 smallholder farmers by using first-loss capital and concessional financing to reduce investment risk (AATIF, 2023).

Across these cases, the pattern is consistent: structured risk-sharing, market-building investment, and pathways for commercial capital to expand as sectors mature. AT now presents a similar opportunity.

Blended finance combines capital and capability-building so that ventures can address market access, evidence, regulatory, and distribution barriers together.

What Blended Finance Needs to Do in AT

To work effectively in the AT sector, a blended finance mechanism must address the structural barriers identified earlier in the report.

Prioritise patient equity over debt: Blended finance mechanisms in the AT sector should prioritise patient equity and flexible financing over conventional debt, reflecting the longer timelines required to build markets and reach scale. Complementary instruments, including returnable grants, results-based financing, SAFE agreements, and convertible debt, can support earlier and higher-risk stages without imposing premature repayment pressure. These instruments should be sequenced to match the risk profile of each stage of venture development.

De-risk private investment structurally: Philanthropic and public capital must absorb early-stage risk through mechanisms such as first-loss positions. Transparent risk-sharing creates a protected entry point for commercial investors and allows capital to enter a sector that would otherwise appear too uncertain.

Integrate technical assistance: Capital alone rarely resolves the barriers AT enterprises face. Support in areas such as regulatory navigation, procurement engagement, distribution partnerships, and evidence generation must be embedded within the mechanism rather than treated as optional add-ons.

Bridge high-income and lower-income markets: Investment structures must accommodate enterprises operating across both high-income and lower-income markets. Many AT companies generate commercial returns in high-income markets while expanding access in lower-income contexts. Financing mechanisms that recognise this dual-market model are better aligned with how the sector actually scales.

Build pipeline alongside capital: A blended finance mechanism cannot rely only on enterprises that are already investment-ready. It must also strengthen the pipeline by supporting those approaching growth readiness, helping them develop the evidence, market access strategies, and financial structures required to attract investment.

The Ecosystem Layer

Capital alone does not build a market. The financing mechanism described above depends on a surrounding ecosystem to function. In AT, that ecosystem still needs to be strengthened.

Market-shaping organisations: Policy and market-shaping organisations help create the conditions for sustainable investment by strengthening procurement systems, regulatory clarity, and accessibility standards. Initiatives such as WHO's GATE programme, ATscale, GDI Hub, and UNICEF's AT Innovation Programme play important roles in this market-building work.

Venture support infrastructure: A stronger scale-up support is needed to translate innovation into investable companies. Incubators and accelerators can help ventures refine product–market fit, build evidence, strengthen business models, and prepare for engagement with investors and institutional buyers. While early-stage support in the AT sector is now relatively well developed, programmes supporting ventures approaching scale remain limited. Expanding this layer of support would help build the pipeline of companies capable of absorbing growth-stage capital.

Disabled founders and innovation networks: Investment mechanisms should also recognise the role of disabled founders and innovators. Peer networks within the sector already function as important systems of knowledge exchange and credibility, particularly in markets where formal validation pathways are limited. These networks often surface practical insights about user needs, distribution challenges, and product adoption that conventional market research does not capture. Including disabled people directly in investment decision-making roles can therefore strengthen both risk assessment and product–market fit evaluation.

DOT GLASSES: When the Ecosystem Is the Strategy

Dot Glasses has developed an adjustable eyewear system and portable testing kit that trained non-specialists can use to fit glasses in under a minute, without electricity or specialist equipment. Active across nine countries with 130,000+ glasses distributed, none of that reach was built through direct retail. Growth has come entirely through health facilities, micro-entrepreneurs, employer programmes, and NGOs, partners with existing last-mile presence. The product works because the ecosystem around it was designed with the same intentionality as the product itself.

Dot Glasses shows how product design and delivery design can work together.

Part Four:

The Case for Action

Why Now: The Conditions Are Right

The investment case for AT through blended finance is not new. What is new is the convergence of conditions that makes acting now qualitatively different from acting earlier.

The Market Signals Are Converging

Demand continues to expand

Demographic change, rising non-communicable disease, and stronger recognition of disability rights are steadily increasing global demand for AT. These long-term trends point to a market that will continue to grow in scale and importance over the coming decades.

Technology is lowering the cost of innovation

Advances in AI, digital health infrastructure, and distributed manufacturing are reducing the cost of developing assistive technologies. Services that previously required expensive specialist involvement are increasingly becoming scalable products. As a result, unit economics are improving and more ventures are becoming commercially viable.

The regulatory environment is shifting

Accessibility requirements are becoming embedded in regulation across major markets. The European Accessibility Act, which came into force in 2025, requires accessibility compliance across sectors including e-commerce, banking, transport, and digital services, implemented through each country's national law. For investors, this creates the type of regulatory tailwind that has historically preceded large capital inflows in sectors such as renewable energy and digital health.

A pipeline of investable ventures exists

Years of sustained investment in incubation and early-stage support have produced a cohort of ventures approaching growth-stage readiness. These companies have products in market, growing user bases, and early revenue. The pipeline exists. What is missing is capital structured to support their next stage of growth.

Investors who move now will help shape the standards, data infrastructure, and market expectations that future investment will follow.

The Window for First-Mover Advantage

The AT sector is approaching the stage where early, structured investment can shape the direction of the market.

In sectors such as fintech for emerging markets, digital health, and climate technology, investors who moved early helped define standards, attract the strongest ventures, and build the benchmarks that later investors relied on. Those who entered later participated within frameworks already set by others.

AT now presents a similar opportunity. Measurement frameworks are still emerging, and institutional capital has not yet fully entered the sector. Investors who move now will help shape the standards, data infrastructure, and market expectations that future investment will follow. The first-mover advantage in a sector without established comparables is significant, and the window remains open.

What Success Looks Like

- **For users,** it means AT reaching more people at lower cost and higher quality across both high-income and lower-income markets.
- **For ventures,** success means a clear pathway from growth-stage development to larger-scale investment, supported by capital and expertise aligned with the realities of the sector.
- **For governments,** it means translating regulatory commitment into procurement action, developing mechanisms designed for early-stage and specialist suppliers, not just established ones. Closing this structural gap is a prerequisite for blended finance to work at scale.
- **For investors,** it means access to a sector with strong structural demand, improving unit economics, and early opportunities to shape emerging market standards.
- **For the ecosystem,** success means the development of a more coherent and well-capitalised global AT market, one that moves beyond donor dependency toward sustainable innovation and legitimate investment.

Part Five:

Recommendations

What Each Actor Can Do

Closing the AT financing gap will require coordinated action across the capital stack. Different actors play distinct but interdependent roles in building a functioning investment market. Progress will depend on how effectively these contributions align to reduce risk, strengthen market pathways, and enable ventures to scale.

The recommendations below outline specific roles each actor can play in moving the sector from fragmented support to a coherent and investable market.

For Philanthropic Funders and Concessional Capital

- **Anchor the market through first-loss positions:** First-loss capital can play a catalytic role in blended finance structures by absorbing early risk and enabling participation from private and impact investors who would otherwise remain on the sidelines.
- **Commit to longer time horizons:** AT ventures typically require multi-year pathways to scale. Funding approaches aligned with five-to-seven-year growth cycles are better suited to the realities of market development.
- **Fund support alongside capital:** Market access, regulatory navigation, and evidence generation are often prerequisites for investment readiness. Supporting these areas alongside capital can significantly improve outcomes.
- **Invest in ecosystem infrastructure:** Pipeline development, shared metrics, and sector data are foundational to market growth, but are rarely funded through commercial investment. Concessional capital is well placed to support these public goods.

For Impact Investors and Development Finance Institutions

- **Engage early in AT as an emerging category:** Early engagement allows investors to build familiarity, shape benchmarks, and develop internal frameworks in a sector that remains under-recognised.
- **Participate in blended structure:** Blended finance can create entry points that align with existing risk-return mandates, particularly where concessional capital is used to reduce downside risk.
- **Use instruments suited to growth-stage ventures:** Patient equity, convertible instruments, and revenue-based financing are often better aligned with AT business models than traditional debt.
- **Build sector understanding over time:** Direct engagement with ventures, field exposure, and specialist partnerships can help bridge current knowledge gaps and support more informed investment decisions.

For Governments and Procurers

- **Use procurement to signal demand:** Well-designed procurement mechanisms, including multi-year frameworks and aggregated purchasing, can provide the predictability that investors and ventures rely on.
- **Link policy commitments to purchasing systems:** Integrating AT into national strategies is most effective when supported by procurement pathways that translate policy into sustained demand.
- **Enable regulatory flexibility where appropriate:** Approaches such as innovation sandboxes can help ventures generate evidence while navigating compliance requirements, particularly in emerging categories.
- **Strengthen cross-sector coordination:** Alignment across disability, health, innovation, and industrial policy can reinforce market signals and reduce fragmentation.

For Ecosystem Builders and Venture Support Organisations

- **Expand support at the scale-up stage:** While early-stage support has grown, there remains a gap in programmes focused on ventures approaching or entering growth. Addressing this gap can strengthen the overall pipeline.
- **Develop shared evidence infrastructure:** Common metrics, documentation frameworks, and market insights can help ventures communicate value in ways that resonate with investors and institutional buyers.
- **Improve coordination across programmes:** Greater alignment across accelerators, funders, and ecosystem actors can reduce duplication and make better use of limited expertise.
- **Include lived experience in decision-making:** Involving disabled people in investment and programme design can strengthen venture selection, risk assessment, and product-market fit.

A Final Word

The AT sector does not need more proof that the problem exists, more evidence that enterprises are capable, or more agreement that action is required. It needs actors that believe in and are willing to build the financial architecture that converts that potential into scale. The opportunity is real, the pipeline exists, and the window is open.

Addressing this challenge requires coordinated action across multiple layers of the ecosystem, including innovation support, venture development, market shaping, and new financing mechanisms. In response, GDI Hub has created GDI Accelerate, a platform designed to strengthen the systems required for inclusive innovation to reach scale.

GDI Accelerate focuses on three interconnected layers: strengthening innovation pathways so promising technologies reach real-world deployment; building local capability and ecosystems that support inclusive technology development; and unlocking financing mechanisms that allow enterprises and markets to grow. In doing so, GDI Hub's role is to act as a long-term market steward, building the knowledge, connections, and shared infrastructure that allow the AT market to become self-sustaining over time.

The insights presented in this report are intended to inform and guide these efforts, as well as the broader work of governments, investors, development partners, and innovators seeking to expand global access to AT. Unlocking the market for AT will require not only innovation, but the systems and partnerships that allow innovation to thrive.

References

- Africa Agriculture and Trade Investment Fund (AATIF). (2023). *Annual Report.*
- ATscale – Global Partnership for Assistive Technology. (2023). Wheelchair Product Narrative.
- Convergence. (2024). State of Blended Finance 2024.
- Green Climate Fund. (2023). Annual Results Report 2023.
- The Global Fund. (2023). Results Report 2023.
- International Finance Corporation (IFC). (2024). Investing for Inclusion: Exploring a Disability Lens – A Guide for Investors.
- Tracxn. (2024). Assistive Tech Sector Report.
- OECD. (2020). Blended Finance Principles for Unlocking Commercial Finance for the Sustainable Development Goals.
- World Bank. (2021). Disability Inclusion Overview.
- World Health Organization (WHO). (2022). Global report on health equity for persons with disabilities. World Health Organization.
- WHO and UNICEF. (2022). Global Report on Assistive Technology.
- World Health Organization. (2023). Assistive Technology Fact Sheet.
- WHO. (2026). Blindness and vision impairment (Fact sheet). World Health Organization.
- Return on Disability Group. (2020). The Global Economics of Disability: Annual Report.

Appendix A: Case Studies

The following case studies profile growth stage AT enterprises supported through GDI Accelerate. They span mobility, communication, vision, rehabilitation, and literacy, operating across Sub-Saharan Africa, South and Southeast Asia, and North America. They illustrate recurring challenges in scaling AT ventures in lower-income and under-resourced markets: working capital constraints, regulatory complexity, evidence packaging for institutional buyers, and the gap between product delivery and sustained user outcomes. Each profile describes the enterprise's innovation, delivery and revenue model, key constraints, and the strategic focus areas addressed through the programme.

Dot Glasses

- Vision access
- Delivery to under-resourced settings
- East Africa
- Scaling stage

130,000+
Glasses distributed

9
Countries active

400+
Distribution points

1M / yr
Target by 2028

The Problem

Eye-care professionals are scarce and concentrated in cities. In many low- and middle-income settings, the bottleneck is not cost but the absence of any viable system for reaching people in rural and peri-urban communities where need is greatest.

The Innovation

An adjustable eyewear system with a portable testing kit that trained non-specialists can use in under a minute, without electricity or specialist equipment. Designed to work in the communities that conventional optical retail never reaches. Dot describes it as an optical shop in a bag.

Why it Works

The model was built around the real constraints of delivering in under-resourced settings, not adapted from systems designed for different contexts. Approximate correction that is accessible outperforms precise correction that is not.

Delivery Model

Growth is entirely partnership-led: health facilities, micro-entrepreneurs, employer programmes, NGOs, and government-linked channels. Partners handle distribution in their communities; Dot provides the kit, training, and supply chain. Keeping the upfront cost low for partners is a deliberate choice to make it easy for facilities with limited capital to offer glasses as an add-on service.

Revenue Model

Wholesale supply through a globally consolidated supply chain, with country-level distribution to retail partners. Employer and government channels offer more predictable revenue than individual consumer sales.

Key Constraint

Working capital for inventory and distribution expansion. Growth requires capital ahead of revenue: too large for grants, too unfamiliar for most investors.

Regulatory Barrier

Rules on who can test vision and dispense glasses vary country by country. Navigating this in each new market adds cost and time, and can slow expansion significantly.

What Support Helped

The GDI Accelerate Growth Sprint produced a clearer go-to-market approach by channel and a regulatory checklist per country, so growth is not held up by compliance uncertainty.

GDI Hub, via AT2030, has also supported field testing of the DOT Glasses model - backing the study's design, ethics and dissemination so the company can robustly test and validate its simplified vision model – providing a credible evidence-building pathway.

Wider Implication

Dot Glasses shows that getting assistive technology to the people who need it is a design challenge as much as a logistics one. Simplifying the product and process so that existing community-level workers can deliver reliably is a principle replicable across many AT categories. Linking access to economic outcomes, productivity and income, also opens employer and government channels that health-only framing does not.

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DeafTawk

- Communication access
- Sign language interpretation

- East Africa / Singapore
- Growth stage

30 sec
Average connection time

1,100+
Interpreters on platform

90%
Revenue from human interpretation

3
Disabled co-founders

The Problem

For Deaf people, everyday interactions — healthcare, work, public services — depend on sign language interpretation that is often unavailable, slow to arrange, or inaccessible outside cities. Traditional interpretation requires advance booking and is hard to scale.

The Innovation

On-demand sign language interpretation via HD video call, connecting Deaf users with human interpreters in around 30 seconds across multiple sign languages. The platform is building toward AI-driven sign-to-text and sign-to-voice capabilities to extend reach beyond what human capacity alone allows.

Why it Works

Inclusive communication treated as an on-demand service rather than a scheduled resource changes the economics for both users and institutional buyers. Corporate and government clients pay for accessibility compliance; Deaf users gain reliable, immediate access to interpretation when it matters most.

Delivery Model

Human interpreters handle the majority of interactions today, with domain-specific coverage for legal, medical, and educational contexts where precision is critical. Enterprise contracts with employers and institutions provide the most stable revenue. AI-enabled translation is being developed as a second lane: extending reach in lower-stakes contexts and reducing dependence on interpreter availability over time.

Revenue Model

Primarily enterprise: corporate clients and institutions pay for inclusive communication services to meet accessibility obligations. Individual users and public sector procurement represent additional channels. Human interpretation currently accounts for around 90% of revenue.

Key Constraint

Interpreter shortages, particularly in specialist domains, limit capacity at peak demand. Scaling through AI requires significant investment in data, linguistic expertise, and engineering at a stage where those resources are limited.

Evidence Gap

Institutional buyers understood the problem DeafTawk addresses. What they needed was structured outcome data: resolution rates, user independence metrics, cost comparisons. Converting compelling user stories into decision-grade evidence was the gap between interest and procurement commitment.

What Support Helped

The GDI Accelerate Growth Sprint helped DeafTawk clarify a two-lane growth plan: strengthening enterprise adoption now, while building a staged AI product roadmap for sign-to-text and sign-to-voice capabilities.

Wider Implication

DeafTawk illustrates a tension common across AT: **the evidence that matters to users and communities is not always the evidence that unlocks institutional capital.** Structuring outcome measurement so that impact is legible to procurement teams and investors, not just visible at the community level, is often what determines whether a venture can grow.

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JOGO Health

- Digital rehabilitation
- Chronic pain
- US and India
- Growth stage

2
Markets: US and India

FDA
Cleared digital therapeutics platform

Harvard
and Mayo Clinic affiliated trials

+15
Peer-reviewed publications supporting the approach

The Problem

Millions of people with chronic pain and neuromuscular conditions have limited access to effective rehabilitation. Care is often episodic, expensive, and dependent on in-person specialist visits. Between appointments, patients have little support to continue therapy or track progress, which slows recovery and increases long-term costs.

The Innovation

A wearable sensor and software platform that guides patients through personalised rehabilitation at home, while allowing clinicians to monitor progress and adjust treatment remotely. The approach is grounded in neuroplasticity: helping the brain and body relearn healthier movement patterns through structured, feedback-driven practice rather than medication or invasive procedures.

Why it Works

The platform's precision, delivering real-time, calibrated feedback on movement, drives neuroplastic change more effectively than standard rehabilitation. JOGO's studies show clinical outcomes that exceed those of conventional care, a result attributed to the quality and consistency of the feedback loop the technology enables. By extending the reach of clinical expertise beyond the clinic, JOGO allows more therapy to happen without proportionally increasing specialist time. This improves outcomes for patients and reduces costs for health systems. As AI is integrated further, the platform becomes more scalable without reducing clinical quality.

Delivery Model

Patients use the platform at home, guided by the software and supported remotely by their clinical team. JOGO is designed to fit into existing care pathways, particularly physiotherapy and specialist clinics, rather than replace them. The enterprise targets health systems, employers, and payers as its primary buyers, with individual clinics as an additional channel. A separate pathway for lower-income markets is being developed, structured to reflect different price points and healthcare systems.

Revenue Model

Platform licensing and clinical partnerships, with sustainability dependent on winning reimbursement from payers and health systems. Employer health programmes represent a parallel revenue stream. Unit economics improve as the platform scales across more users without increasing clinical support costs proportionally.

Key Constraint

Winning reimbursement from health insurers and public payers requires extensive clinical evidence and lengthy negotiation cycles. This is capital-intensive and takes years, creating pressure on enterprises that need revenue well before those pathways are established.

Adoption Barrier

Integrating new technology into clinical workflows requires buy-in from clinicians, administrators, and procurement teams. Even a well-evidenced product faces a long adoption process inside health systems that are risk-averse and slow to change.

What Support Helped

The GDI Accelerate Growth Sprint helped JOGO move from a broad pitch to a focused strategy: identifying which conditions and buyer types to prioritise first, and what evidence and workflow integration each requires to convert interest into adoption.

Wider Implication

JOGO illustrates a challenge common to technology-enabled health products: **strong clinical evidence is necessary but not sufficient.** The enterprise must also invest in translating that evidence into formats that clinicians, procurement teams, and payers can each act on. Sequencing matters: identifying where adoption is fastest, building a strong case in that context, and using it as a foundation for broader expansion is more effective than pursuing every market at once. For investors, the improving unit economics as AI reduces the ratio of specialist time to patient outcomes is what makes this category increasingly worth understanding.

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SynPhNe

- Neurological rehabilitation
- Stroke recovery

- Singapore, India, US
- Growth stage

15+
Peer-reviewed publications

3
Markets: Singapore, India, US

“A SynPhNe in every home”
Founding vision

The Problem

Stroke and other neurological conditions can leave people dependent on others for everyday tasks, placing a heavy burden on families and health systems. Effective rehabilitation requires high volumes of guided practice, but specialist therapists are scarce globally relative to patient need, sessions are expensive, and most existing devices are not suitable for use at home. Without enough therapy, recovery plateaus.

The Innovation

SynPhNe captures brain and muscle signals simultaneously in real time, using this data to personalise therapy and guide patients through structured recovery exercises. The platform monitors for unhelpful compensation patterns and adjusts accordingly, making therapy more precise than conventional approaches. It is designed for use in clinical settings and, increasingly, at home.

Why it Works

By treating the patient and their caregiver as a single unit of impact, SynPhNe makes a case that resonates with payers and health ministries: reduced caregiver hours and avoided long-term care costs, not just improved clinical scores. Reframing rehabilitation as an economic argument as much as a clinical one is what opens procurement conversations.

Delivery Model

SynPhNe reaches patients through rehabilitation clinics and institutional partners, with distributors handling delivery and installation. SynPhNe provides training, certification, and clinical support. Training has been a significant bottleneck: the venture is shifting toward online learning with shorter in-person components to reduce the time and cost of getting providers up to speed. Customer models include purchase, lease, and lease-to-own to suit different institutional contexts.

Revenue Model

Mixed: reimbursement from health systems where available, plus direct out-of-pocket payment across purchase, lease, and service contracts. Cost reduction per session is an active focus, with AI emerging as a lever for improving training efficiency and clinical support over time.

Key Constraint

Moving from clinical adoption to commercial scale requires logistics, customer support, and training infrastructure that has not yet been tested at volume. Training providers to use the system confidently remains the primary bottleneck to growth.

Quality Risk

Scaling without compromising clinical quality is a genuine tension. The venture’s value depends on precise, personalised therapy. If delivery partners are not adequately trained, outcomes suffer and the commercial case weakens with it.

What Support Helped

The GDI Accelerate Growth Sprint helped SynPhNe turn the training bottleneck into a concrete plan: simplified onboarding, a structured certification pathway, and a clearer split between what must be done in person and what can be delivered remotely.

Wider Implication

SynPhNe shows that for complex rehabilitation technologies, **the hardware is not only the hardest part of scaling.** Workforce training and delivery infrastructure determine whether a clinical product can become a widely accessible one. It also demonstrates that reframing AT impact in economic terms, documenting what caregivers gain alongside what patients recover, is often what can shift a product from interesting to procurable for the institutions that control purchasing decisions.

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Shonaquip

- Mobility and posture
- End-to-end AT systems

- South Africa and beyond
- Scaling stage

30+
Years shaping a market and delivering AT in Africa

3 regions
Southern, East and West Africa

Tens of thousands
People reached over time

The Problem

In many low-resource settings, children and adults with disabilities cannot access appropriate AT or the support needed to use it safely over time. When devices arrive without assessment, fitting, training, or repair pathways, they get abandoned. The result is not just unmet need but preventable harm: poor posture, complications, exclusion from school, and heavy burdens on caregivers.

The Innovation

Shonaquip delivers AT as a complete system rather than a product. Locally designed and manufactured posture and mobility devices are paired with clinical assessment, fitting, training, follow-up, and repair. The model also includes workforce training for therapists and caregivers, parent networks, and advocacy to improve procurement standards, recognising that the device is only as good as the support around it.

Why it Works

Thirty years of experience has shown that donated or cheaply procured devices without service support get abandoned within months. Shonaquip's model is built around lifecycle outcomes rather than unit delivery, which reduces abandonment, improves health outcomes, and builds a stronger case for procurement systems to move away from lowest-cost purchasing toward value-based models.

Delivery Model

Shonaquip reaches users through government procurement, NGO and donor programmes, medical insurance, outreach clinics, and regional partners. Delivery involves multidisciplinary teams: clinical staff, technicians, educators, and parent champions working together. The model is intentionally end-to-end, with follow-up and repair built in from the start rather than treated as optional extras. Regional expansion is being pursued through partnerships where local distribution and service capacity can be established first.

Revenue Model

Revenue comes from government procurement, NGO and donor funding, medical insurance, and fee-for-service training. Sustainability depends on procurement models that recognise lifecycle value rather than rewarding the lowest upfront cost. Long payment cycles from government buyers create significant cash flow pressure.

Key Constraint

Procurement cycles are slow and payment delays are significant, creating cash flow pressure that limits how fast the enterprise can grow. Capital that can absorb these cycles is essential and largely unavailable through conventional financing instruments.

Systemic Barrier

Procurement systems that reward lowest upfront cost consistently undervalue the lifecycle model Shonaquip has built. Shifting buyers toward outcome-based purchasing requires both evidence and sustained advocacy, neither of which is fast or cheap.

What Support Helped

The GDI Accelerate Growth Sprint helped Shonaquip translate a complex systems model into a clearer regional growth strategy: where to build partnerships first, how to articulate cash flow realities to funders, and how to use lifecycle evidence to shift procurement decisions.

Wider Implication

Shonaquip is a reminder that device distribution and access to AT are not the same thing. **The gap between delivering a product and delivering a functioning outcome is filled by assessment, training, follow-up, and repair** — none of which conventional procurement systems are designed to fund. For investors and policy makers, financing mechanisms and procurement frameworks need to be redesigned around outcomes and lifecycle value, not unit costs. Enterprises that have built this model already represent some of the most durable and impactful AT providers in the world.

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Thinkerbell Labs

- Braille literacy
- Visual impairment

- India and beyond
- Growth stage

10,000+
Children who have learned Braille using Annie

300
Centres across 26 Indian states

14+
Languages supported

Time
Magazine Best Invention 2022

The Problem

Many blind and visually impaired children face delayed literacy because Braille learning depends heavily on specialist teachers who are scarce, unevenly distributed, and expensive to deploy at scale. Without consistent access to a trained teacher, children fall behind in ways that affect their education, independence, and long-term opportunities.

The Innovation

Annie is a self-learning device that guides children through Braille and foundational literacy and numeracy without requiring a specialist teacher to be present. A companion platform, Helios, gives schools, educators, and funders visibility into learning progress across multiple students and settings. Together they make Braille learning measurable and scalable in a way that teacher-dependent models cannot.

Why it Works

By removing the need for a specialist teacher at every interaction, Thinkerbell enables schools, NGOs, and government programmes to reach more children with fewer specialist resources. Institutional buyers get a product that delivers measurable learning outcomes and fits within existing education systems. Over time, repeat procurement becomes possible, improving planning and delivery predictability.

Delivery Model

Growth has been built primarily through institutional partnerships in India and internationally, including schools, NGOs, government programmes, and distribution partners. Even in India, the business is largely institutional. Organisational memory within partner institutions has led to repeat procurement, which remains unusual in the AT ecosystem but is important for planning, forecasting, and scale. International expansion has also included white-label and distribution arrangements, while larger institutional opportunities would require a step change in manufacturing capacity.

Revenue Model

Revenue is driven primarily by institutional device sales, with a higher-value offer when the Helios monitoring platform is included. More predictable institutional demand improves cashflow visibility and allows Thinkerbell to offer better pricing to larger contracted customers. Unit costs are expected to fall as manufacturing scales, and Helios has also been tested as a subscription offering in select markets.

Key Constraint

Manufacturing capacity is the primary bottleneck. Current production is around 1,600 units per year. A potential UNICEF order could require 10,000 units. Moving to higher-volume manufacturing through an OEM partner requires capital and operational changes that have not yet been secured.

Evidence Gap

Helios provides continuous monitoring of student progress across deployments, but large institutional buyers — particularly governments and multilateral agencies — require higher-order evidence such as controlled studies, longitudinal outcomes, and cost-effectiveness models. Building this decision-grade evidence layer on top of existing product data is critical to unlocking large, multi-year procurement programmes.

What Support Helped

The GDI Accelerate Growth Sprint helped Thinkerbell map the operational shifts needed to move from small-batch to high-volume production, clarify which markets and channels to prioritise first, and package the product roadmap so that learning outcomes are measurable and fundable at scale.

Wider Implication

Thinkerbell shows that removing specialist dependency from AT delivery is not just a design achievement: **it is a commercial one**. Products that can be deployed and used reliably without expert presence at every step are far more scalable through institutional channels. It also illustrates a tension that many AT enterprises face at this stage: demand is outpacing the manufacturing and evidence infrastructure needed to fulfil it. Closing that gap requires capital and operational support that goes well beyond what early-stage funding provides.

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Participant Assistive Products

- Wheelchair access
- Affordable mobility
- Lower-income markets
- Growth stage

>$1M
Annual revenue from multiple large customers

6,000
Units sold per year, growing 30-50% annually

50,000
Annual production capacity

The Problem

In many lower-income markets, people who need wheelchairs face three overlapping barriers: quality devices are too expensive, donated chairs are often the wrong fit for the user or the environment they live in, and there are few pathways for repair or replacement when things go wrong. The result is high abandonment, preventable harm, and continued exclusion from education and economic life.

The Innovation

Participant designs and manufactures wheelchairs built for real-world conditions in lower-income settings, with affordability and maintainability as core design requirements. Rather than adapting devices designed for high-income markets, Participant starts from the user context: varied terrain, limited repair infrastructure, and buyers ranging from individuals to governments and NGOs with very different price expectations.

Why it Works

Scaling manufacturing volume reduces unit costs, which improves both affordability and commercial margins simultaneously. A tiered channel strategy, serving distributors, clinics, NGOs, and government buyers at different price points, allows Participant to maintain mission without sacrificing sustainability. The Zambia contract demonstrates that institutional demand exists and is willing to commit at scale.

Delivery Model

Participant sells through multiple buyer types: distributors, clinics, NGOs, and government-linked procurement programmes, each with different pricing tolerances and service expectations. A tiered pricing strategy is being developed to serve these segments without undermining affordability goals. While Participant's roots are in lower-income markets, its products are designed to be affordable enough for NGOs but of sufficient quality for higher-income markets, a strategy reflected in growing sales in Spain and the UK, which contribute meaningfully to profitability. Partners remain essential for fitting, repair, and follow-up pathways that prevent abandonment.

Revenue Model

Product sales across tiered channels, with pricing structured by buyer type. Higher margins from distributor channels cross-subsidise lower price points for clinics and NGOs serving users directly. Scale economics are central: unit costs fall as volume increases, improving both access and commercial viability.

Key Constraint

Working capital for tooling and manufacturing expansion is the immediate barrier. The plan to scale production is credible and costed, but requires upfront investment before the revenue to support it arrives. This is a classic financing gap: too large for grants, too unfamiliar for most investors.

Strategic Challenge

Wheelchair markets are not one market. Distributors, clinics, NGOs, and governments have different pricing tolerances, procurement cycles, and service expectations. Serving all of them without a clear segmentation strategy risks compromising both margins and mission.

What Support Helped

The GDI Accelerate Growth Sprint helped Participant clarify its commercial direction: sharpening the tiered channel approach, identifying higher-income markets as the priority for new product and sales focus, and articulating a path toward stronger revenue growth and improved profitability, while the NGO market continues to develop on its established momentum.

Wider Implication

Participant illustrates that affordable AT and commercially viable AT are not opposites, but **getting there requires deliberate market segmentation and the right kind of patient capital.** It also shows that mobility access is an infrastructure question as much as a product one: increased sales only translate into sustained independence if fitting, repair, and follow-up pathways exist alongside the device. For funders and investors, working capital instruments tied to manufacturing scale are often more relevant than equity at this stage.

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UK International
Development
Partnership | Progress | Prosperity


AT2030


Global
Disability
Innovation
Hub


GDI Hub
Accelerate