AT Impact Fund Venture Playbook

This playbook was designed to help current and future fund operators and ventures learn from the work of the Assistive Technology Impact Fund (ATIF). It aims to share lessons from launching a fund in a nascent sector and working with a small portfolio of assistive technology ventures. The learnings are broken into different actions (or 'plays') which we hope people in similar situations can pick up, learn from and use. Some plays are at the fund level, and some are focussed on individual ventures.

AT Impact Fund was launched out of the UK aid funded AT2030 programme.

| See the venture plays | See the venture profiles | See the fund plays |

WHAT IS A PLAYBOOK?

A playbook offers practical guidance to practitioners within a particular domain or context. This guidance is often focused on overcoming challenges, or disseminating the use of certain approaches, methods or tools. A resource for entrepreneurs, venture builders, funders, accelerators and investors.

Some examples include

- The NESTA, Playbook for Innovation Learning to support innovation practitioners with 35 methods/tools for making learning decisions.

- The OECD Innovation Playbook with 'options for action' to help government employees overcome common public sector challenges.

- The UKAid-funded Frontier Technologies Hub, Frontier Technologies Playbook, which features 'quick, cheap and often counterintuitive' ways in which organisations have overcome common challenges in scaling frontier technologies in the international development sector.

WHAT IS THE ASSISTIVE TECH IMPACT FUND?

The Assistive Technology (AT) Impact Fund was set up to learn if an offer of grant capital alongside technical and venture-building support would help assistive technology (AT) ventures in Africa overcome the challenges of creating a market offer and then scaling this offer within Africa.

The AT Impact Fund was established as part of the UK aid-funded AT2030 programme, led by Global Disability Innovation (GDI) Hub and operationalised as a collaboration between GDI Hub, Brink, and Catalyst Fund as venture partners. AT Impact Fund forms part of a growing assistive technology innovation ecosystem which includes Innovate Now – Africa's first AT accelerator (also established by AT2030 and led by GDI Hub).

ABOUT

1. Despite a growing pipeline of ventures coming from accelerators, laboratories, and research groups globally there remains a lack of evidence of ventures entering markets and scaling their offer. This is often due to an over-focus on product development and a lack of associated business development which covers procurement and supply[1].

2. The scale problem is also compounded by poverty, 80% of people who need AT live in emerging markets. Disability is also a cause and consequence of poverty. This makes AT innovation landscapes the most challenging in which to succeed.

3. AT Impact Fund offers a mix of AT-specific expertise and technical assistance in product development alongside venture-building support. This is complemented by access to the AT2030 global partnership which includes GDI Hub's WHO Collaborating Centre on AT which supports ventures in developing clinical outcome evidence.

4. Across the globe only 10% of people who need AT have access to it. The AT Impact Fund aimed to drive change by offering a complete package to ventures as they enter markets and tested their offers in Africa.

AT landscape in Africa

A lack of high-quality AT within low-resource settings

There is limited access to AT in many parts of Africa, even for high-income users. The pipeline of companies developing new assistive technology is thin but growing. A classic (unicorn) success story is yet to emerge from this nascent ecosystem. AT2030 data and evidence collected by GDI Hub suggested there was a need for a dedicated fund which combined venture building and technical support to help ventures overcome the valley of death (the period ventures operate without any revenue from products and services, relying on their initial invested capital). This gap is known to be deeper and longer for AT than for other sectors.

Underdeveloped local AT ecosystem

Historically markets have not existed for AT and therefore have been filled by the work of Non-Governmental Organisations (NGOs), which have developed local and global mechanisms of scale, but require continued grant funding to maintain supply for the growing demand. There is also an undesired knock-on effect, in that the market fails to emerge as the demand is being met by 'free at point of delivery' services. There is desire from NGOs to evolve their business models, and governments would like to see local, resilient, sustainable provision which includes local production. Local production is now seen as a viable addition to the global marketplace. This approach would further enable the local repair of products, bringing skills, knowledge and sustainability to AT products and communities.

Inappropriate and unaffordable devices

End-to-end service models are extremely difficult to provide, due in part to the high cost of imported devices - which are often not fit for purpose in African contexts. Combined with a lack of appropriate health and education professionals, many people end up with devices which they cannot use, leading to exceptionally high levels of abandonment.

What we set out to do

The AT Impact Fund set out to show solutions exist to the problem of equitable access to AT.

AT Impact Fund established flexible funding which ventures could use to develop a bespoke mix of venture building alongside technical support, as they develop entry into a new markets. Learning from other emergent sectors rolling out business models regionally, we backed five ventures.

Our objective was to work with companies that were ready to challenge sector norms, and work to develop a new narrative of success for investors to pave the way for a more systemic, long-term change for AT.

The AT Impact Fund believed that by providing 12-18 months of grant funding along with six months of intense venture-building and technical support from a team of specialists, it would improve the opportunity for AT ventures to achieve financially sustainable scale – thereby creating valuable case studies and exemplars for future ventures.

Plays for designing a fund for the Assistive Tech sector

Designing, building, and operating a first-of-its-kind fund was never going to be easy, and it was only made harder by the introduction of the Covid-19 pandemic. Here are some of the things we did and lessons we learned along the way at a fund design level:

Bespoke multidisciplinary support

Adaptable funding pipeline

A strategic approach to scaling AT

Collaborating across workstreams

Providing bespoke multidisciplinary support

Problem

Scaling an AT venture requires multidisciplinary skills and expertise, and ventures can lack the breadth needed.

What we did

Although AT Impact Fund provided financial support to ventures through grant funding, finance alone would not ensure the scaling of big ideas. The assistive technology sector is really a 'sector of sectors' and so a generic team consisting of the same skills would not be fit-for-purpose.

AT Impact Fund gathered specialist expertise from three different organisations (GDI Hub, Brink and Catalyst Fund) to deliver innovation, venture building, assistive technology and technical expertise. Each individual venture required a different make-up of support. Some needed marketing and manufacturing guidance, while others needed business model and local market knowledge. To cater for individual needs, a unique 'Scale Studio' was created for each venture.

Once formed, these 'Scale Studio' teams worked in multiple sprints over the course of six months, each directed by a designated Scale Studio team lead who was much more generalist in their skill set. The team lead role acted as a trusted advisor to each venture, which continued after the initial six-month Scale Studio support.

Lessons learnt

1. A single team lead is extremely helpful for building trust with the ventures, organising and aligning the different expertise, and to maintain velocity in the work.

2. A full portfolio of support that could be drawn down from day one proved more effective than responding to ad-hoc, responsive requests.

3. Local knowledge is a core skill that is necessary when entering any new market.

4. It is important to have excellent communication between technical and business teams so business strategy issues can drive technical development and technical development can drive new venture plays.

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They just have to facilitate! They give the instructions, they give the context, talk the patient through everything. But, in essence, the technology controls the rest... — Tersia de Kock, hearX

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A strategic approach to scaling AT

Problem

Future funders are often unaware that technical and venture development are both key to success.

What we did

An advisory committee was carefully recruited to support the AT Impact Fund team at key decision-making moments and to provide grantees with guidance and advice. Selection aimed to ensure the right mix of on-the-ground expertise, connections to the ecosystem, experience as a person with a disability (both in the UK and in African markets), and governance and strategic direction.

The five members of the advisory committee were:

• Astou Dia - Start up coach and Angel investor (Cote d'ivoire)

• Farida Bedwei - Entrepreneur & disability advocate (Ghana)

• Mansoor Ahmad MBE - International & Economic Development Expert (UK)

• Olutosin Oni - Venture Capitalist (Nigeria)

• Victoria Austin - CEO of the Global Disability Innovation Hub (UK)

The committee received written proposals before hearing a live pitch from the ventures. This approached enabled the subsequent Q&A to be the most valuable section of the decision-making progress.

Lessons learnt

1. More structured engagement from expert advisory board members could increase access to local and global networks.

2. Ongoing communication supports both ventures in their development pathway and the advisory committee in providing the most impactful insights.

3. Maximising the advisory committee expertise to build and improve proposals helps ventures to utilise this resource.

4. Reflection periods between a pitch and decision making is a valuable way to drive consideration and for follow up questions to be answered.

Adaptable funding pipeline

Problem

How to structure investments for the first time, through a new mechanism in order to maximise impact.

What we did

AT Impact Fund invested in line with evidence and progress by providing 50% of the funding pool for the first six months of activities, and then asking ventures to reapplied for further funding based on their progress to date.

Initial selection narrowed 90 applications to a handful of pitches. Follow-on funding aligned directly to individual progress within the AT Impact Fund period of support. Feedback and reporting allowed a robust degree of accountability, and enable bespoke input to meet the needs of the ventures.

Lessons learnt

Funding needs to be able to flex in line with needs and changes on the ground. This was done in several ways:

1. Assessments were conducted by the team lead, who had built a trusted relationship with the venture and had transparency of the external challenges and barriers that may impact delivery (against the initial ambition of the venture over the first six months of the programme).

2. Short term payment milestones agreed with grantees and in line with sprints of iterative work.

3. The team – mindset, talent and work ethic – is one of, if not the, most important elements for venture success. This is also the hardest part to confidently scrutinise in an investment process. By having a trusted venture lead we could assess this element of the venture alongside milestone and output measures to evaluate re-investment potential.

Collaborating across workstreams

Problem

No one organisation had all the unique and diverse skills necessary to make this vision a reality on their own.

What we did

The AT Impact Fund had three main ambitions. To help scale assistive technology ventures, to learn what worked (and what didn't), and to futureproof by securing future funding.

To reach each of these goals, we worked across three separate workstreams, which we called 'horizons' - each delivered by a team with the expertise and knowledge to maximise the impact of the individual focus area.

Horizon 1: Operations

The day-to-day operations of the fund: managing and delivering the investment process. Working with grantees and servicing the portfolio. This included the programme plan, budget and risks and managing the venture-building and technical needs of companies and deploying scale studio capability.

Horizon 2: Research

The learning, evidence and insights generated by the fund and its operations, which in turn informed the other two horizons. There were two streams of research, firstly "Atomic research" where insights would be shared in real-time to inform sprint decisions. Secondly academic research which informed future funds and long-term development. This horizon held responsibility for the Theory of Change and helped inform impact metrics while developing the evidence and insights around the scale studio offer.

Horizon 3: Future

The wider ecosystem development to ensure longer-term success for portfolio companies (e.g. follow-on investment), as well as refinement of the AT Investment Fund as a vehicle for impact. This horizon established the Circle of Investors and Circle of Partners to test appetite for AT as a sector and disability inclusion as an investment thesis. It also looked to established who is funding/supporting disability inclusion in development. Activities focused on outreach and research, as well as events and mapping of the ecosystem.

Lessons learnt

1. Regular mechanisms to share lessons learnt are imperative for these horizons to be well aligned.

2. Re-capitalization often requires evidence of success, which in turn takes time to capture.

3. Whilst significant the investment of six months proved too short to see immediate gains of substantial growth. Evidence has shown that funding of 12 -18 months is needed when establishing a new AT venture in Africa.

Plays for Ventures

Plays for Sustainably Scaling Assistive Technology Ventures: Working with five pioneering ventures over18 months, we provided grant capital, six months of a customised scale studio team and a further 12+ months of coaching to help each overcome the unique challenges they faced as they tried to scale.

Adaptive inventory management models

Problem

There is a severe lack of sustainable distribution models for the assistive tech sector, and building them is expensive and time-consuming.

What we did

Buying or renting a warehouse is expensive, and the additional cost of warehouse staff, security, tax, utilities often outweigh the benefit of expanding operations.

OADCPH (African Organisation for the Development of Centres for People with Disabilities) sells assistive tech products across the African continent, shipped from their warehouse in Lome, Togo. With AT Impact Fund's support, they explored a second warehouse in Kenya.

Instead of starting from scratch, OADCPH partnered with APDK (Association for Persons with Disabilities in Kenya), an organisation with 30+ offices across Kenya. For a regular monthly fee, OADCPH could use these offices to stock assistive tech, as well as taking advantage of their security and logistics staff. This approach overcame the restrictive cost of sourcing a new warehouse, and the barriers of registering as an organisation in Kenya.

Lessons learnt

1. A close personal relationship with the APDK leadership was essential. OADCPH visited APDK in Kenya. The APDK Chairman and CEO reciprocated with a visit to Togo, creating a direct line of communication and understanding.

2. By signing a Memorandum of Understanding (MoU) ahead of a more formal contract, OADCPH could begin collaborating early and testing the relationship before investing in a more detailed legal document.

3. The relationship allowed OADCPH to test their assumptions about expanding to Kenya, such as the idea that they could ship products more quickly and cheaply from Kenya to countries in East and Central Africa. OADCPH could subsequently make their own investments in personnel and warehouse space in Kenya with greater certainty.

4. Priority alignment and understanding was important across both organisations to overcome any teething issues. This partnership was a top priority to OADCPH, but for a large organisation like APDK it was one of many competing priorities across their portfolio.

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We can do the business we want to do and the costs will be low. We know that people with disabilities are likely to be in a cycle that links disability with poverty, so we want to avoid increasing prices, and this is one way we can do that. — Anarame Kpandressi, OADCPH

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Use technology to bridge the skills gap

Problem

There is a severe lack of medical specialists (i.e audiologists) in Africa, so treatment in hard-to-reach places doesn't always make business sense.

What we did

Getting products to rural and hard-to-reach locations is difficult at a reasonable cost. With assistive technologies, where a diagnosis process often must happen, it is even harder.

There's often only one audiologist for every million people in the global south, so instead of trying to build an entire distribution network around this scarce resource, hearX looked to combine the services of existing lay health workers (who were already going to these hard-to-reach locations by motorbike to administer other health services) with a tech solution, so anyone with a smartphone could diagnose hearing problems.

The combination of semi-skilled lay health workers who are already going to these hard-to-reach places and the hearX app, which is built on a series of strict audiologist protocols, meant that hearX exponentially increased the number of people able to administer hearing examinations and the number of hearing aids they distributed. By broadening out the workforce through tech based solutions, training and product innovation the reach of AT to both hard-to-reach locations and the community as a whole is significantly increased. Koala's easy-to-fit upper limb prosthesis is another example of this approach.

Lessons learnt

1. It's important to understand how existing healthcare is administered in hard-to-reach places to explore how this infrastructure could be used as an opportunity for distribution.

2. Financial incentives should work for all parties to ensure the service is delivered to a high standard, incentivising through commission is one potential option.

3. Keeping the technology requirements as low as possible for both the user and the lay health worker enables reach and efficiency to be maximised.

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Everything is researched and clinically validated to make sure that we can give services at the same level, but that can be facilitated by a non-professional. The app controls the protocols, so we don't expect the community health worker or clinic nurse to run protocols or make interpretations. They just have to facilitate! They give the instructions, and talk the patient through everything, but the technology controls the rest — Tersia de Kock, hearX

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Investing in a local workforce

Problem

There's a lack of skilled health workers to administer assistive tech.

What we did

Core to Koalaa's value proposition is making prosthetics like shoes: affordable, comfortable, and easy to take on and off. This makes Koalaa prostheses simple to fit. During COVID-19 pandemic, Koalaa was able to even fit people remotely over video-call.

In Sierra Leone, Koalaa has trained a range of people to fit Koalaa prostheses, including physiotherapy students, lay people, NGO staff, as well as 'limb buddies'. This last group are people with limb difference, who use Koalaa products themselves: users fitting users. People interested in becoming a fitter are invited to a one-day training conference, at the end of which they are presented with a certificate and a 'clinic in a bag', which includes instructions on how to log data and fit prostheses, the prostheses themselves, and the tools to fit them. Developing this network is crucial in achieving the objective of scaling the product nationwide.

hearX are also overcoming this challenge through their app based hearing solution – which automatically programmes hearing aids within seconds following a simple diagnostic hearing test conducted through the app. The entire streamline, low-cost approach is designed for ease of use, allowing lay heath workers to be trained quickly to deliver the end-to-end service in communities across Kenya.

Lessons learnt

1. Capturing data can be a significant challenge. Uploading data using Google Forms via a mobile was often restricted by data limits or connectivity. It also relies on data being captured at point of service.

2. The 'train the trainer' model has shown potential. Koalaa's final AT Impact Fund training conference was delivered by clinicians from Sierra Leone's National Rehabilitation Council, without Koalaa present. The approach was a success; developing this cascade model will be critical to the scaling of Koalaa in the region.

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We're not trying to take prosthetist's jobs away! We can learn from their expertise, but this is such a simple fitting process that we can work with anyone really. And we're going to need that, because in a country like Sierra Leone, where there isn't enough qualified health care staff, that's the only way we can scale. — Niall Marshall, Koalaa

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Use word of mouth to recruit users

Problem

It is essential to build an AT venture with and for users, but finding users can be a significant challenge.

What we did

In Sierra Leone, Koalaa have discovered that word of mouth is the most effective channel for reaching people. It proved more effective than technology-based mediums like radio. Disability Associations have also been an effective way to get word out there. These community-based organisations, were formed as part of Sierra Leone's Persons with Disabilities Act in 2011, support the welfare, protection, and rehabilitation of persons with disabilities across the country.

The Disability Association networks can be expansive. One of these networks outside Freetown has a database of more than 2,000 people.

Lessons learnt

1. Leverage existing trust relationships such as working through Disability Associations not only helped identify users but gave a trusted introduction. This is crucial when many people with limb loss do not want a prosthesis: either because they have lived for many years without one that they believe it will break/not work, or because without access to wider employment opportunities some people rely on begging as their primary income source.

2. Building a chain of trust was effective, by starting at the top and following established networks. In this case the government of Sierra Leone's National Rehabilitation Council (NRC) gave trusted introductions to Disability Associations.

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If you go for a big marketing push and really shout that you're here, it can be difficult because you have to shout at everyone to find the tiny group you want to speak to. Using word of mouth allows us to be more targeted and the most effective word of mouth comes from these networks of disability associations — Niall Marshall, Koalaa

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Diversify income streams

Problem

The funding ecosystem for assistive technology ventures is practically non-existent, and funding opportunities are few and far between.

What we did

Many assistive technology organisations are structurally set up for one predominant income stream - but the sector is so nascent that it is wise to keep as many avenues open as possible.

Largely funded through philanthropic donations and registered as an NGO, MiracleFeet, was unable to sell its product for a profit to those who could afford it. Once they explored a social enterprise model they realised that they could benefit their founding mission if they both donated and sold braces, depending on the right commercial proposition for the context. Nigerian doctors validated that they felt some of their patients, especially those in private hospitals (who would currently fly abroad for clubfoot treatment) would and should pay for the clubfoot braces that MiracleFeet provide.

Charging for products can be a success approach for many assistive technology ventures; having both a for-profit and not-for-profit business arm was a common organisation structuring strategy which we saw during our open call for applications (i.e. hearX).

Lessons learnt

1. AT Impact Fund ventures did not undermine their own brand by charging those who can afford to pay for assistive technologies, in the search for a more sustainable business model. It is however beneficial to have a strong mission-driven brand.

2. It's important to be clear on which geographies or markets have the right attributes for each commercial model (donated or paid).

3. As an NGO, seeking more sustainable revenue streams will be seen as a good thing by your current donors. It will not be seen as suggesting you don't need their philanthropy.

4. If raising money from venture capital it's important to be clear on which part of the business you are raising money for.

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Previously hearing health in LMIC would typically be the fly-in-fly-out model. And we just really didn't want to do that. We're trying to find a middle ground where we're not just giving everything for free because then people don't take ownership and there's no aftercare. We decided to go with a 'for-profit entity' in Kenya, to try and have a sustainable model that can cover the costs, is able to run on its own and sustain the model on a longer-term scale, and not being dependant on continuous grant funding. — Chesca Colloredo-Mansfeld, MiracleFeet

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Flexible business models

Problem

Buyers of assistive tech often think of products as too expensive, and aren't sure of all the specific costs associated or lifetime value of the assistive tech products.

What we did

A Koalaa prosthesis lasts for two years (on average), at a cost of around $75 per year per user. To get to this figure, Koalaa calculated all costs incurred over these two years for an end-to-end service for a user (including product development, shipping, user recruitment, product maintenance, and follow up). In conversations with funders, users, government and other key stakeholders, we positioned the cost of Koalaa as US $75 per user per year. Then we split up who might pay for it. Splitting up the $75 cost like this immediately began to seem more feasible for different contributors and gave Koalaa a clear target to aim for.

Different sources of funding could further reduce at this figure including: Koalaa's profit margin from operations in more developed countries, government contribution, user contribution, and international or local donors or charities. Koalaa was able to have open, honest conversations across these groups, with no assumptions about who could or could not contribute.

Lessons learnt

1. Some users will not be able to contribute at all, but others might be able to contribute more. Koalaa's current hypothesis is that users, on average, might contribute $5 per year. They are still working out when and how to make this charge, but early evidence shows it is feasible and may increase how much a user values their prosthetic.

2. Contributions may be in-kind rather than direct. The government of Sierra Leone, for example, exempt Koalaa prostheses from import tax and allowed them to leverage existing supply chains to reach more rural areas. The equivalent of contributing US $20 per user per year.

3. By using its own (UK) profit margin to contribute to operations in Sierra Leone, Koalaa had invaluable help in setting up, but it is a difficult model to sustain in the long-term.

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Once we had the cost for an individual user, we had to try and figure out if the government could support this. For example, the Ministry of Health are really engaged and they've demonstrated that by giving their staff to do fittings. There was an entire day when trained Ministry of Health stuff, went out and fitted users. That's salaried staff members and transport costs. That's real money even though it's not cash directly to Koalaa. — Niall Marshall, Koalaa

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Appropriate product positioning for different market segments

Problem

As many people in LMICs live below the poverty line, they are unable to access imported AT solutions. Locally made AT solutions can be flexibly priced to reach those users.

What we did

Wazi, a Ugandan eyeglasses manufacturer, had ambitions to make locally made eyeglasses that were affordable to all Ugandans, and designed and manufactured glasses for Ugandan people. As a bootstrapped startup, creating a sustainable line of revenue was of critical importance. Wazi found early on that the growing middle class could afford to pay for the eye glasses at their current manufacturing price point. This revenue bought Wazi the time it needed to scale up its manufacturing processes and operations in an effort to reduce the final price point of its product.

Starting at a middle price point also aided brand strength as it positioned itself as an aspirational brand.

Lessons learnt

1. Revenue in the initial start-up period is valuable. Ventures may have to be dynamic in approach to maximise potential income from specific segments of society, that may not be the priority of the long term vision.

2. The impact of this model can act as a selling point to those who can afford the product, replicating a pay-it-forward model.

3. It's important to be honest and authentic in your positioning. Delivered effectively it can be a valuable asset for your brand.

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Most of our marketing and advertising efforts are targeted towards the middle income segment and a percentage of that money goes to subsidising eye care services for people within the lower income part of the community. What that means is that the middle income customers feel good about what they're doing and we have a chance to extend our impact to people who maybe wouldn't have been able to get eye care at all. — Brenda Katwesigye Baganzi , Wazi

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Create a location matrix

Problem

Understanding which country to grow into, given the lack of market data and all the factors to consider.

What we did

OADCPH (African Organisation for the Development of Centres for People with Disabilities) knew they wanted to set up a centre in East Africa to send products to their clients in the region more quickly, and with lower shipping costs. They were unsure of which country to enter, and had a range of factors to consider, including:

1. Legal requirements for setting up and running: What are the costs, timeline, and requirements to register an entity? And how does this vary for different entities? What are our ongoing reporting requirements?

2. Taxation: What are import and export taxes? Corporate tax? Are there any tax exemptions?

3. Business operations: What is the cost of salaries and office/warehouse space? What's the availability of talent?

4. Proximity to the sector: What clients and partners are in the country that we can collaborate with? And are there many existing clients there?

OADCPH turned these questions into a matrix and interviewed key stakeholders in each country to gather as much information as possible. They focused on Tanzania, Kenya and Rwanda as three potential countries. By the end, they had enough information to decide on Keny

Lessons learnt

1. Speaking to a range of people builds a rich, diverse matrix. OADCPH engaged accountants, disability institutes, entrepreneur support organisations, and legal professionals in each country. This gave them a holistic view of each country, and the matrix guided them to asking specific questions and capturing the data all in one place.

2. Although laying out the information was helpful, it was hard for OADCPH to shake off their existing bias towards setting up in Kenya. Having a neutral perspective at decision point can be extremely valuable.

3. Ask a combination of general questions and specific questions (based on the 30 criterion outlined in the location matrix), to unlock insight that might not have been considered. One favourite question of OADCPH: "We're coming to [Kenya/Tanzania/Rwanda]. How do we set up?"

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We talked to all kinds of people who are knowledgeable about the issue and who might be well placed to give us reliable information. We went to them with general questions: "We are coming here. We want to establish an NGO. How do we go about it?" From their answers we got new questions and by asking those questions we were able to be sure that we were on the right track — Anarame Kpandressi, OADCPH

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Find a local market champion

Problem

It takes a long time to truly understand the local contexts and dynamics of a new market you are trying to enter, and it is hard to design a new venture well without that knowledge.

What we did

Having the venture directly in the market they are looking to enter is ideal, but not always possible. Being in-country was particularly challenging during COVID-19 pandemic. The AT Impact Fund ensured there were champions on the ground able to have local, critical market conversations. These were drawn from the core fund team (e.g. Catalyst Fund) and wider AT2030 partners (e.g. CHAI).

Nifemi and his team, all Lagos locals and very skilled in their own specialist domains, helped MiracleFeet with a whole host of things that would have been much more difficult without local knowledge and relationships. From utilising a contacts storage facility, sending the first trial order of products, to understanding the local visa process, and even having an unbiased best first guess at which hospitals the target market was most likely to use. None of the team were assistive technology or medical experts, and that really didn't matter - their expertise was in knowing the market MiracleFeet was entering.

Lessons learnt

1. If it's not possible to have someone from the fund in country, it's important to bring local knowledge into the team.

2. Trust is key. Nifemi was a mutual connection of the MiracleFeet CEO, which increased trust and sped up the relationship building considerably.

3. Having a local champion does not negate the need to be on the ground as much as possible.

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Emailing and calling does not really work in places like Nigeria. People are looking for face-to-face conversation, so by having some people on the ground who could go with our endorsement and have those initial conversations in person and open those doors up - it was much easier for us to move things forward — Chesca Colloredo-Mansfeld, MiracleFeet

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Find your strategic partners

Problem

The ecosystems for assistive technologies in individual African countries are so nascent that leaders of assistive technology companies carry the burden of building end to end solutions.

What we did

Wazi had a skills gap in their core initial team when it came to manufacturing know-how. After a failed attempt to hire for this role, they realised that it would be hard for anyone locally to have the exact experience they were looking for, considering the new machinery they planned to import.

Instead of hiring they looked for a strategic partner who could fill this knowledge gap. First, they considered more established glasses brands in more developed markets who used similar manufacturing methods, but it became clear that the value of the partnership would be one directional.

Wazi eventually found a great fit with a French company who were also the manufacturer of the machinery itself. Through establishing a close and mutually beneficial relationship, Wazi managed to get trained up on their new machinery by true experts, filling the knowledge gap in their team whilst helping the partner improve their external facing reputation of assisting more customers in different contexts.

Lessons learnt

1. The right partnership must be mutually beneficial. Assistive technology companies must be clear on what they can bring to the table for a successful partnership.

2. Strategic partners don't have to be local, they just need to be strong in the exact thing which you are weak on. Sometimes it is difficult to find the exact fit of an area you are weaker on within the local ecosystem. When this happens you have to be even more precise in your search to avoid inadvertently reducing the local opportunities.

3. A good partnership can be exponentially valuable, so it is worth taking your time to find the right partner instead of the first partner.

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We were looking for help around how to manufacture because we were struggling with the new manufacturing techniques involving CNC machining. We had an old way that we were using, but it wasn't too efficient and we were looking to change. These guys had done this for a long time and they had mastered it. We were able to learn from them and they connected us to the people that they worked with in France and that's how the ball was set rolling. — Brenda Katwesigye Baganzi , Wazi

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Build an honest brand

Problem

There is no blueprint for building an aspirational assistive technology brand in Africa.

What we did

Wazi used their sales downtime to plan a brand launch for when their new eyeglasses were ready to hit the market. Their new manufacturing processes meant they had a much bigger design opportunity for the frames of their eyeglasses, so they decided to run an open competition for designers to create a new range of frames.

The competition worked for a multitude of reasons, it aligned with their "Designed by Africans" brand value, but it also helped them turn what could have been a business risk (stoppage of current sales) into an opportunity. The competition acted as engaging marketing content, and started to build hype around a new brand launch.

Utilising local designers was also the first step in ensuring their brand was as user centred as possible. All the design entries came from local talent and the people who would benefit from Wazi's product upon launch. Wazi let the brand be truly led by those would benefit from it.

Lessons learnt

1. Build a brand that is authentic to the team and their motivations. It is important to build a strong genuine brand, rather than replicating from elsewhere.

2. Don't be scared to show the process of your work, it can be an asset.

3. Using customers as talent will build your brand authenticity when done well.

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Within a space of about a month we were able to find 120 designers. Had we done this as a 1-2-1 thing it would have taken us 12 years to find that many designers. At least 30% of those designs were of high enough quality that we could use them. It meant we weren't limiting our talent pool to the circles that we already knew. It opened us up to new countries like Nigeria. It gave us some diversity of ideas and processes from across the continent. — Brenda Katwesigye Baganzi , Wazi

99

Make measuring impact core to everything

Problem

Proving impact is crucial to ensure evidence is available for funders.

What we did

In Sierra Leone, Koalaa sought to understand the impact of their upper-limb prostheses. As the product was soft-shell, affordable and easy to fit, they feared it might lead to a perception of less impact than conventional prostheses. Koalaa used the opportunity while fitting their first 27 users to ask a series of questions about their day-to-day life, developing a "day in the life" questionnaire.

This built trust and provided a natural opportunity for data generation, which could be referred back to in follow-up interviews. Koalaa were able to act immediately on feedback and action learnings. For example, changing the colour of the prosthesis to skin tone. Following initial work, an impact case study and report was developed alongside local and wider project partners.

Impact case studies were also developed for Wazi and Miracle feet. These impact reports proved so successful that further ventures contacted AT Impact Fund looking to have their impact case study assessed. So far the following companies have use the methodology which was co-developed between GDI Hub and 60dB : MiracleFeet, Wazi, Koala, KBTA, Trestle Labs, Lugha Ishara, The Accessibility Institute.

Lessons learnt

1. Future research is focussed on capturing stories and developing the narratives of users, which can be used as evidence of impact to help complement quantitative analysis. By making the output more visual, it provides the reader a real-world sense of the product and how it works.

2. It pays to find the right partner. It took some time to find a trusted in-country partner, able to carry out rigorous research to evaluate the impact of the Koalaa prosthetic. The quality of the output outweighed any additional investment for engaging a more experienced partner.

3. Working with partner organisations held in high regard in the sector creates credibility, and a pipeline to future potential contracts.

4. The journey to proving impact is an ongoing one. The next step for Koalaa is to work with 60 Decibels, another impact measurement organisation, on a larger sample of users (200+). As the product gains traction they are also exploring media opportunities to showcase the impact.

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CHIA is an independent organisation, so by partnering with them it means we're not marking our own homework. Out of that work we learned a lot of interesting things about the first people we fitted and we got some really interesting insights in terms of if it was useful, were they still using the prosthetic and if it fitted properly or not — Niall Marshall, Koalaa

99

# Add value through targeted technology

Problem

Understanding where technology can add value in an "analogue" business.

What we did

OADCPH (African Organisation for the Development of Centres for People with Disabilities) wanted to provide an e-commerce platform for their users. They also wanted to digitise their inventory management, using blueprints and user research to help them understand where technology might play a role. Speaking to 8 OADCPH clients, they learnt that back-and-forth over email, Whatsapp and phone calls could be frustrating but valuable for bigger, more complex orders. For instance, one client might be looking for plastic. There are many different types of plastic, so OADCPH would email and ask "Which one?" The client might respond: "What about this one? Can it melt?" And so on.

Subsequently it was concluded that digitising OADCPH's catalogue of basic items, with clear and thorough filters, would be more impactful and easier than creating an end-to-end ecommerce solution with features like digital payments. A blueprint was built, showing how OADCPH staff fulfil an order, and this was then used to pinpoint the precise moments where tech could make their lives easier.

We've also seen from hearX the potential of embracing new communication approaches for aftercare for their hearing aids solutions. Customers received daily contact via Whatsapp over a six-week period, long enough to establish habits, troubleshoot and provide customer care to ensure the adoption and maximisation of the technology.
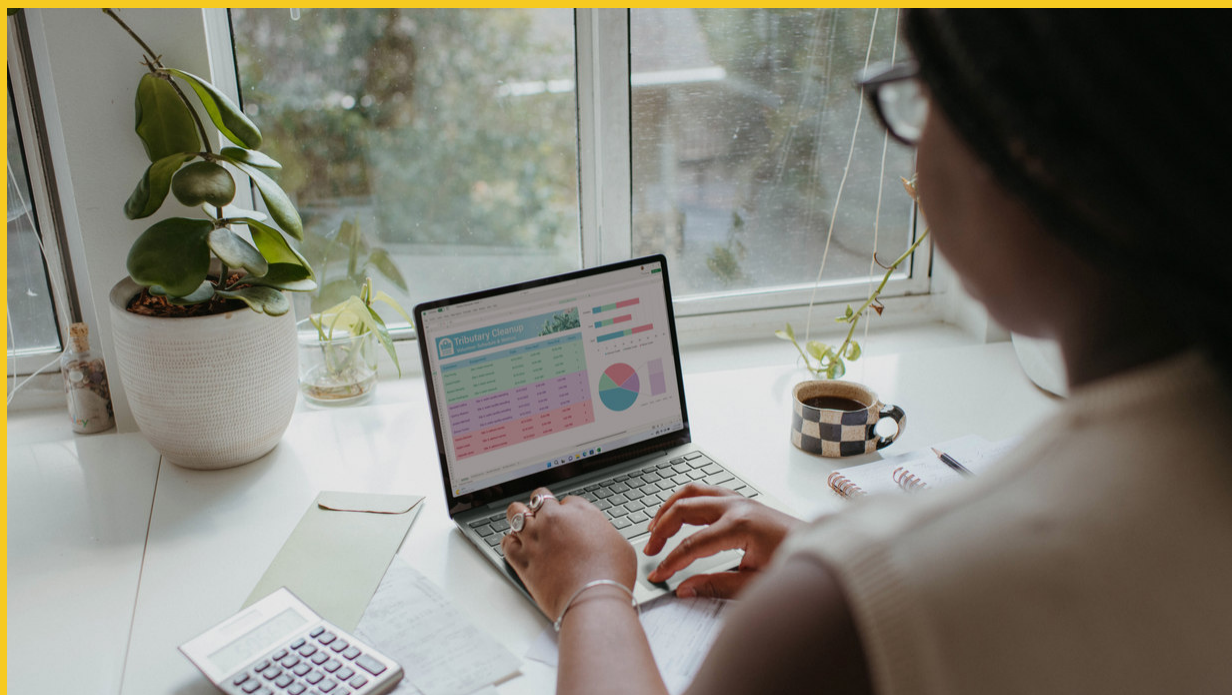
Lessons learnt

1. Tech can't solve everything and isn't always the best solution. Focusing on small individual needs (such as the routine order for repeat clients) gave OADCPH greater confidence that investments in technology were worthwhile.

2. Focus on solving challenges. OADCPH's accounts, logistics, and supplies teams found it difficult to have a single-view of orders in progress. Handover points were identified in the blueprint as the biggest blockers, so it was here they focused their inventory management system. After they'd pinpointed parts of the blueprint, they were able to bring in experts to build an internal inventory management system. As part of their mandate, they trained OADCPH's IT professionals to iterate the system as new needs or problems emerged.

3. One-stop shop tech solutions aren't always the answer. Focussing on the small individual needs where tech can make a real difference can be extremely useful.

4. Despite hearX being a tech-based solution and app driven (for diagnostic, calibration and management), the team put Whatsapp at the centre of their customer care – as the platform their audiences were must likely to engage with while they become familiar with the app itself.

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It saves us time so we can take care of other customers. We're spending our time in a better way to do more relevant things that will help other people. It also helps our supplies, logistics and accounts departments, because everything is digitised so everything is synchronised and that helps us do the work in an easier way and frees people up to do other things — Anarame Kpandressi, OADCPH

99

Adapt value proposition to existing user behaviours

Problem

Getting users to adopt your assistive technology product or service can be challenging, especially when the value it can bring them is not yet known.

What we did

hearX piloted a solution to get high quality, yet affordable, hearing aids to people in hard-to-reach areas. Within the local context, many of those that would benefit from their AT led solution were not aware that they could get help for their hearing difficulties, so hearX' needed to also showcase the difference their product could make at the point of diagnosis.

A significant barrier to hearX's success was identifying users. They partnered with Ilara heath, who already had a large and expanding footprint of primary healthcare clinics in Kenya, which potential users would attend for other medical issues. The partnership meant that hearX could reach potential users by fitting within their existing routines, which lowered the barrier to adoption dramatically.
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Lessons learnt

1. Take as much effort away from your users as possible, especially in the early stages of the life cycle where you haven't proven your product's value yet.

2. Engaging with existing medical routines will help users trust you.

3. Work smart, not hard - partner with other organisations where you have a weakness, especially when piloting a new idea.

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We built in a demonstration step as part of our testing process, so at the end of that process we immediately program the hearing aid according to your hearing profile. As we take off the headphones you already have the hearing aids in your ears and they are programmed to your hearing profile. So as part of that initial first test, we already give an experience of the benefits, and it's been quite amazing to experience the effects of that — Tersia de Kock, hearX

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Meet the ventures

Wazi

hearX

OADCPH

Koalaa

MiracleFeet

Wazi glasses are designed by African artisans, with a variety of styles and face shapes in mind. Wazi sells and distributes both B2C and B2B via eCommerce and traditional channels (eye hospitals, optometrists, retail shops). The company uses a cross-subsidization model to reach into low-income segments in Uganda across the value chain of eye care. Additionally, they work to reduce the stigma around eyecare health, and to improve education around and access to eye testing and treatment.

AT Impact Fund is supporting Wazi to scale its work and impact across East Africa. This involves pivoting to CNC digital fabrication so that the company can scale production, creating an African designed and manufactured product, building a brand and marketing strategy, and developing a distribution model that can reach tiers of low- and middle-income customers.

VENTURE CASE STUDY #1

Wazi

Wazi is an eyewear brand offering high quality glasses that are designed and manufactured in Uganda.

Related plays

| Start in the middle | Find your strategic partners |

Before working with AT Impact Fund, Koalaa's prosthetics had been primarily made, distributed and used in the UK. Through a collaborative design process with local partners, Koalaa has extended the design of the prosthetic solution for the needs of upper limb users in Sierra Leone and for use across the African continent.

AT Impact Fund is working with Koalaa to establish an end-to-end service from manufacturing to fitting, ongoing care and maintenance of the prostheses in urban and rural Sierra Leone.

VENTURE CASE STUDY #2

Koalaa

Koalaa provides an easy to fit, affordable, stylish and functional soft prosthetic.

Related plays

Diversify who can fit a prosthetic

Prove your impact from the start

Position as a subscription

Word of mouth to recruit users

hearX's innovative product makes it possible for lay-health workers to facilitate the detection and identification of hearing needs, as well as demonstrate how hearing aids can help; all in one sitting. Included in the model are the ability to allow customers to try the hearing aid as part of the diagnostic process in the field, so they can better understand its potential benefits, as well as a proprietary mobile-phone based onboarding program to improve use and benefit.

AT Impact Fund is supporting hearX to test a business model for hearing aid provision in Kenya, with a subscription payment model and distribution partners. We are piloting distribution and financing in South Africa and Kenya, with Ilara Health, a health tech company servicing small scale pharmacies.

VENTURE CASE STUDY #3

hearX

hearX Group offers the world's first clinical smartphone hearing solution.
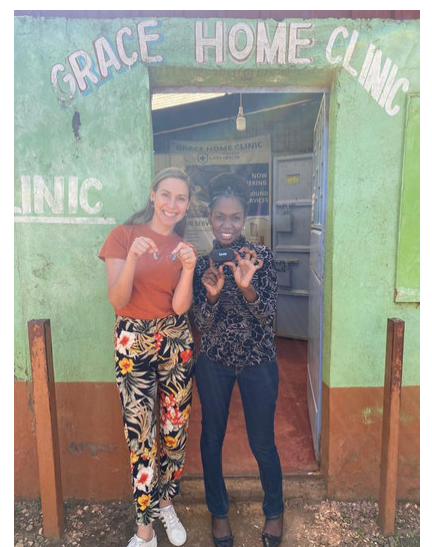
Related plays

Use tech to bridge the skills gap

Find a local fixer

Miracle Feet

MiracleFeet is on a mission to eliminate disability caused by clubfoot, a treatable birth defect and a leading cause of physical disability worldwide.

MiracleFeet provides organisational, technical, and financial support to clinics and practitioners trained in the Ponseti Method, a non-surgical treatment for clubfoot that involves a series of plaster casts and Foot Abduction Braces (FABs). The method has a 95% success rate. MiracleFeet can fully treat a child for only $500, an investment that unleashes an average of $120K of additional lifetime earnings.

AT Impact Fund is working with MiracleFeet to test and validate a business model in Nigeria. Currently, MiracleFeet's FAB (the MiracleFeet brace) is provided free to the user, funded by grant income. By exploring new opportunities for recovering costs, MiracleFeet hopes to create a new revenue stream from brace sales, increasing its sustainability and resilience.

Related plays

Allow different income streams

Find a local fixer

OADCPH

OADCPH (the African Organisation for the Development of Centres for People with Disabilities) aims to provide access to quality assistive technologies (AT) and services.

It does this through a 'one-stop shop', selling a range of AT products across the African continent. Its clients include rehabilitation centres, hospitals, NGOs and clinics. OADCPH has a low cost distribution model, flexible payment facilities and expertise in assistive tech to help clients make decisions about what to purchase. It was founded in 2011, and is based in Togo with 15 employees.

AT Impact Fund worked with OADCPH to digitise the logistics and sales operations, and to test and replicate the entire business model in East and Southern Africa by setting up a centre in Kenya.

Related plays

| Find a local fixer | Becoming tech enabled |

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Further reading

To read further insights about scaling assistive technologies, check out our blog.

Partners