GLOBAL
INNOVATION
FUND

IMPACT REPORT 16/17

GIF invests in entrepreneurs and innovators on their path to improving the lives of millions of the world's poorest people.

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Reflecting on the past year, I am incredibly proud of what GIF has achieved. We have continued to build a diverse portfolio of investments with the potential for high social impact, and our model gained significant interest amongst investors, academics, and other thought partners who are interested in learning about our approach to innovation, evidence, and investing for impact.

Our goal at GIF is to find, fund, and scale-up cost-effective, evidence-based innovations that have the potential to measurably improve the lives of millions of people in the developing world. During the last year, we have built on the strategies and processes we have in place to continue to deliver a portfolio of development innovations with the potential for deep social impact.

Key to our success last year was our ability to count on such an engaged group of donors, whose support enabled us to get out into the world and tell our story. We have made significant progress in developing GIF's brand and active voice in the development community, and in spreading the word about GIF, Practical Impact, and the bridges we are building between the aid community and impact investors.

Looking to the year ahead, there is a great deal for us to be excited about.

A key focus for us throughout this year will be to identify pipeline opportunities for possible co-investments with the South African Department of Science and Technology. Staff travelled to South Africa last year with this objective in mind, and we have already started discussions with promising prospective investments for this year. Having set up a Gender Working Group, we are also looking to focus our sourcing conversations for investments which disproportionately benefit women and girls.

Throughout the year, deal leads will also spend significant time on portfolio management. Venture assistance funds will be deployed towards high priority investments and will aim to increase the impact of the portfolio as a whole, with a goal of maximising and accelerating the social value of our investments.

As we move forward with our investment activity in pursuit of social impact, we will continue to build the reputation of GIF and encourage the adoption of the GIF model more broadly. We go out into the world with clear messages around the power of the use of evidence to screen and source deals, and GIF's position as a "VC for fragile states", designed to take smart risks in hard places to realise outsized social returns.

Alix Peterson Zwane
Chief Executive Officer

About Us

In 2014, the Global Innovation Fund was launched to seek out disruptive innovations with the potential to improve the lives of millions of the world's poorest people. It aims to finance them using the full financial toolkit previously reserved for private sector investments, while drawing on the rigour of development economics to measure impact. Today, the Global Innovation Fund has a portfolio of innovations that are on track over the next decade to improve the lives of millions of people.

Who we are

The Global Innovation Fund (GIF) is a non-profit, social-first investment fund that acts as a 'VC for fragile places', financing dynamic innovators and entrepreneurs whose cost-effective, evidence-based solutions have the potential to measurably improve the lives of millions of people living on less than $5 a day.

In fragile communities and countries, important investment opportunities with the potential for high social return are not being realised due to a lack of appropriate capital for early-stage innovations.

To address this, GIF actively takes smart risks, providing patient capital to entrepreneurs focused on addressing major development challenges in often challenging settings.

With a focus on rigorous evidence, and the ability to make grant, equity, and debt investments, independently or with other public and private sector partners, GIF can invest without the restrictions faced by public development agencies, but with the same commitment to transparency and value-for-money. GIF supports innovators who will scale through private or public pathways, and funds the generation of rigorous evidence as well.

Practical Impact

GIF focuses relentlessly on building sustainable and measured social returns through its portfolio. Key to GIF's ability to understand impact is the Practical Impact approach.

Practical Impact enables GIF to forecast, track, and evaluate results across our investments, and to update risk-adjusted projections as information improves and risks are resolved.

By assessing the breadth of impact (simply put, the number of people who will benefit), depth of impact (the benefit per person relative to annual income), and the probability of success of the innovation (over the same time horizon as the impacts), GIF can make trade-offs between and among disparate proposals to achieve social impact and take smart risks.

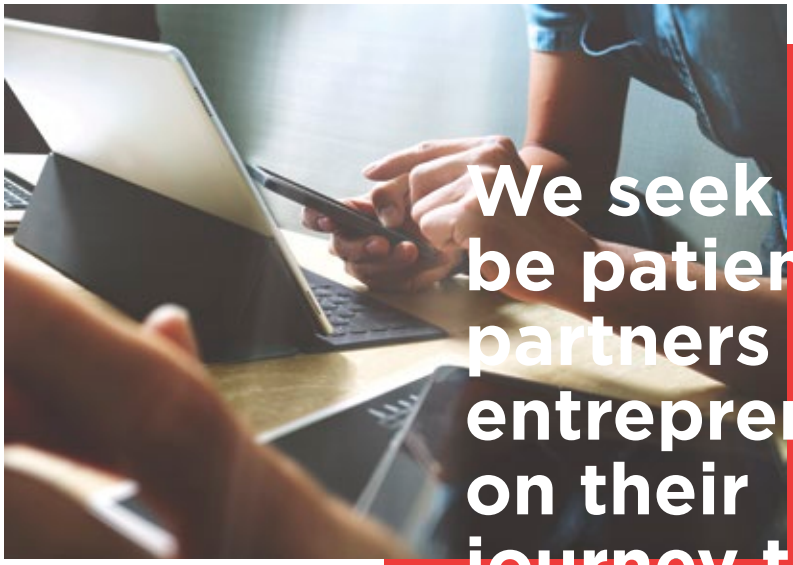
The evidence produced by GIF investments is used both to assess the opportunities for scale and to inform the broader development sector's thinking on development challenges and how to best mobilise resources for impact.

How we work

At GIF, we believe that good ideas can come from anywhere, so our investment process allows for funding any sector or business model. We work with innovators to determine the business need, then construct the best instrument to catalyse their vision.

GIF sources ideas widely and selects strategically. Our investment team actively sources opportunities through a network of national partners, conferences and through referrals. In addition, our open innovation window allows any entrepreneur to apply through the GIF website. Each month we review over 200 applications received through our open window.

Our flexibility allows us to use multiple instruments and to blend capital in investment sizes from US$200k up to US$15m. Our ability to be a patient, longer-term partner has seen GIF drive co-investment by Development Finance Institutions, impact investors, philanthropists, and commercial investors.



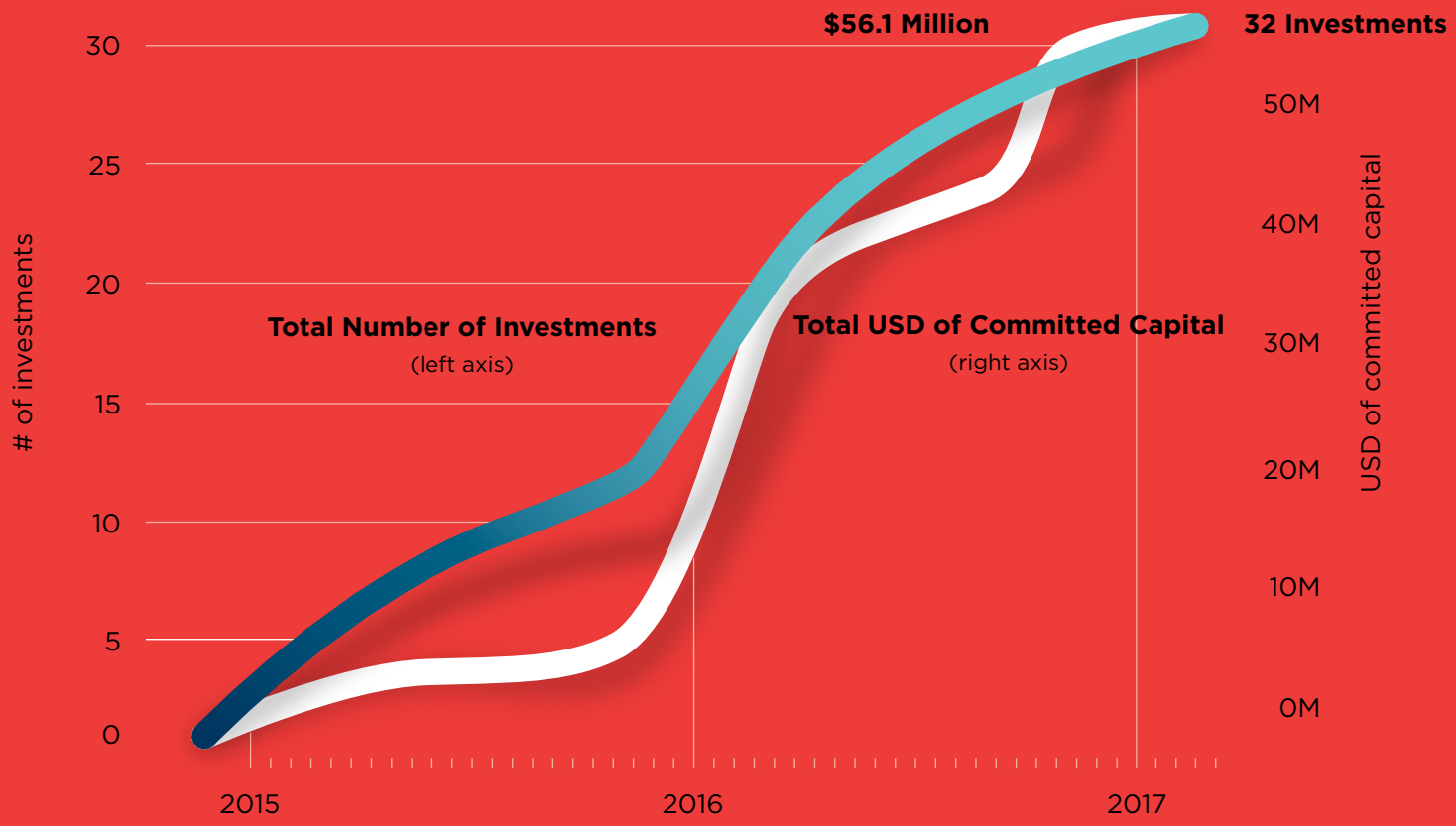
We seek to be patient partners for entrepreneurs on their journey to impact.

GIF's venture support offering supports innovators in ways that go beyond just the money we invest. Demand-driven and customised to the needs of each innovator, in 2017 we used our networks to facilitate follow-on investment, provided mentorship and coaching for early-stage entrepreneurs and commissioned third-parties so innovators can access specialised expertise.

To date, GIF has invested $56m in 32 partnerships. We help entrepreneurs through the journey to scale, using a venture-style staged funding approach in which more speculative ideas receive a smaller amount of funds and larger funds follow successful testing, evidence of impact and achievement of milestones.

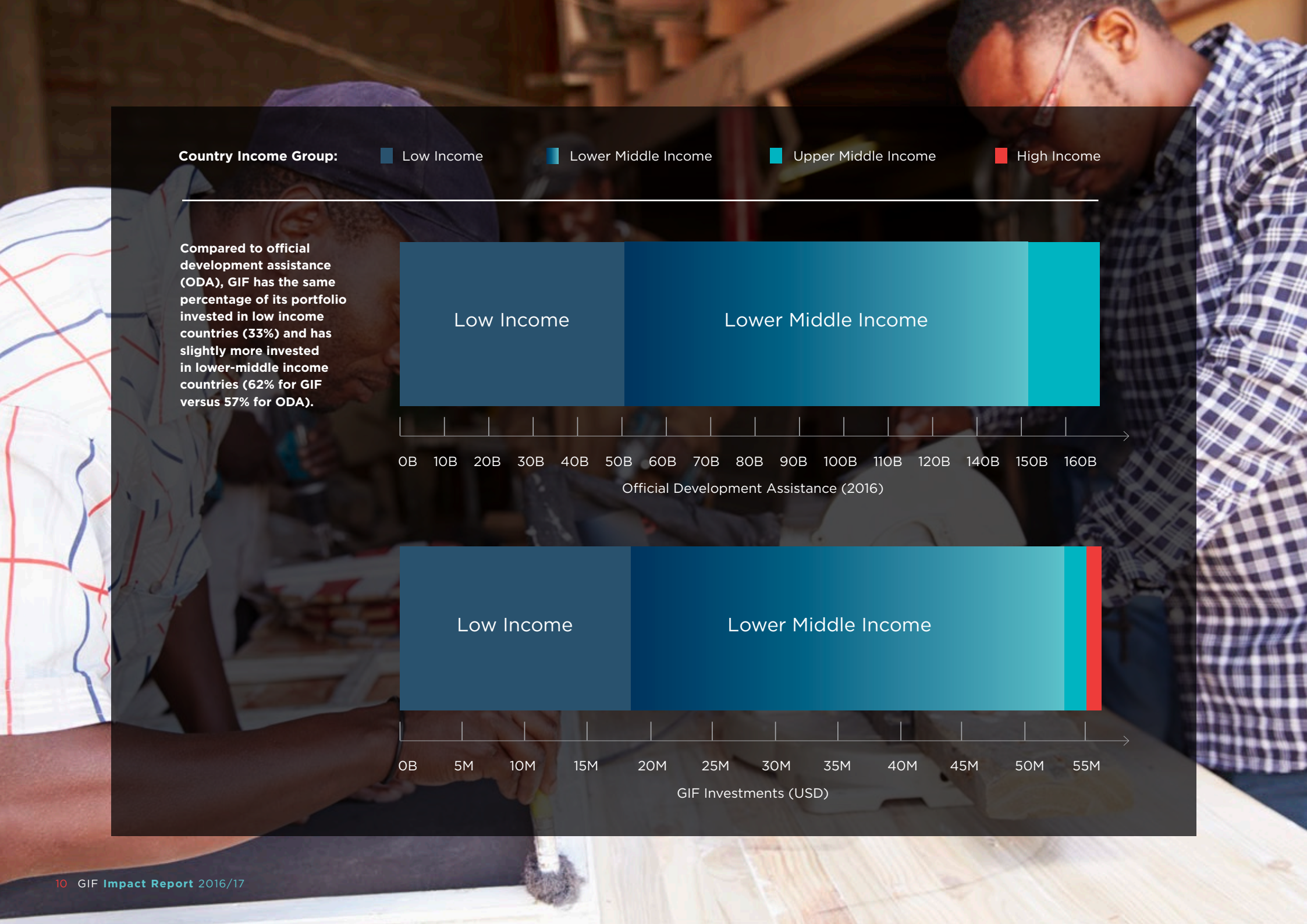
Our portfolio

Since 2015, we have invested $56 million in 32 innovations



The Global Innovation Fund aims to have a measurable impact on millions of the world's poor. Our investment policy defines our target market as people living under PPP$ 5 / day and, in particular, people living under $2/day. This focus is integrated throughout our investment process. In our diligence we will assess the poverty profile of end-users. For innovations or businesses that run the risk of potentially moving up-market and not reaching the poor, GIF will either not invest or mitigate the risk through investment covenants, corporate governance or exit options.

One way to assess whether we're achieving social impact is to understand whether we're investing in countries where they live. Seventy-seven percent of those living under $5/day live in countries where GIF is invested. The similar figure for those living under $2/day is 69%. This portfolio-wide snapshot is complemented with direct welfare measurement of end-users, particularly when we have uncertainty over the poverty reach of a given innovation. Several of GIF's innovations have used simple-to-administer proxy means tests, like the PPI, to assess poverty profiles.


Country Income Group:
Low Income
Lower Middle Income
Upper Middle Income
High Income
Compared to official development assistance (ODA), GIF has the same percentage of its portfolio invested in low income countries (33%) and has slightly more invested in lower-middle income countries (62% for GIF versus 57% for ODA).
Low Income
Lower Middle Income
0B 10B 20B 30B 40B 50B 60B 70B 80B 90B 100B 110B 120B 140B 150B 160B
Official Development Assistance (2016)
Low Income
Lower Middle Income
0B 5M 10M 15M 20M 25M 30M 35M 40M 45M 50M 55M
GIF Investments (USD)

GIF invests in a range of sectors

The GIF portfolio spans across a variety of sectors. GIF's sector-agnostic investment approach means that we can invest outside of traditional development sectors. For example, No Lean Season is a migration intervention that reduces seasonal hunger by providing no-interest loans to enable landless poor to access high-productivity jobs in cities.

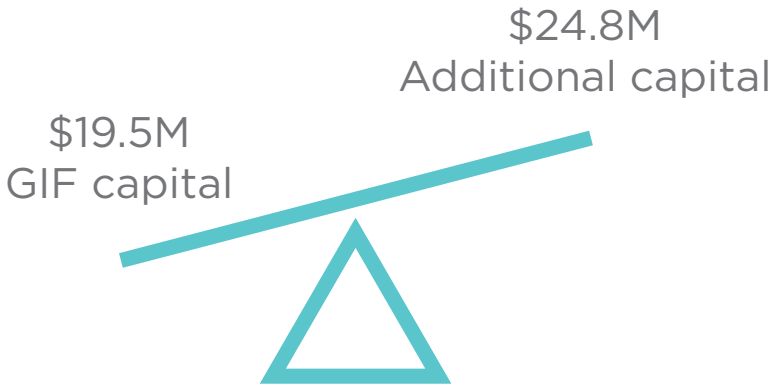
Sector distribution by number of investments

Sector distribution by dollar amount of investments

Our approach also enables us to invest in traditional sectors, but in new and different ways. For example, mass transit projects tend to be costly, capital-intensive projects. WhereIsMyTransport is an open data platform mapping informal transport lines to improve the quality of urban transit planning ultimately aiming to make mass transport more accessible, efficient and safer for the poor.

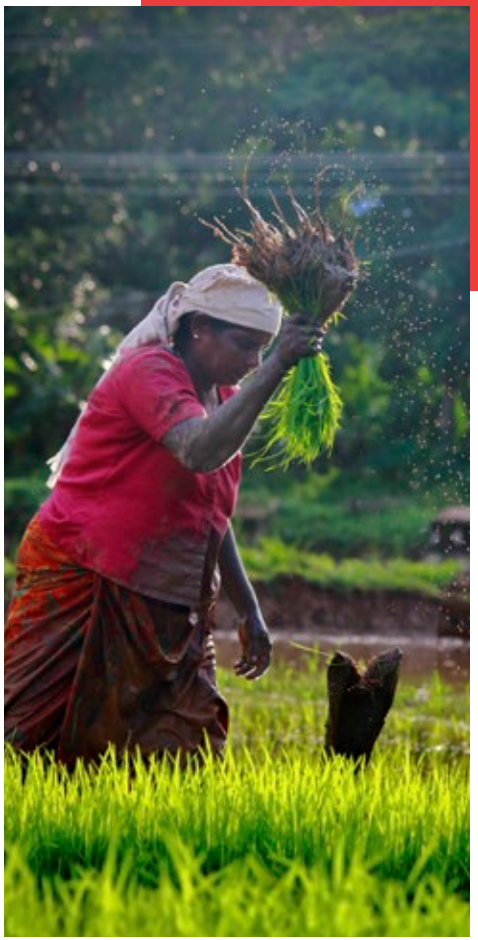
If this innovation is successful in informing urban planners about how to better integrate informal and formal transport, it could help to improve the development effectiveness of much larger investments in mass transit infrastructure.

GIF provides flexible finance



GIF meets entrepreneurs where they are, providing financing fit to the nature of the innovation, its path to scale, and its maturity. Flexibility is more than just the choice of instrument. We can lend in local currency, provided subordinated debt, and use results-based financing for both our risk capital and grant instruments. One example of this is our grant to Mindspark, an innovation using computer adaptive learning to improve learning outcomes in India. Part of our grant is tied to specific outputs and market-level outcomes—rewarding the grantee to crowd-in government financing for the scale-up of computer-adaptive learning.

For GIF's risk capital deals, $19.5 million in GIF investments have mobilized at least $24.8m in additional co-investments alongside GIF. Co-investment come from a variety of sources like DFIs (Proparco), impact investing funds (Unitus), corporate venture capital (Orange Telecom), and Foundations (Shell Foundation).



GIF invests in fragile countries

Sixty-three percent of GIF's investments are being implemented in countries that are defined by either DFID or the OECD as fragile. This includes investments into organizations like MyAgro, which enables extremely poor female smallholder farmers to save up to improve their farms in rural parts of Mali.

It also includes research partnerships, like one in Pakistan helping the health system deliver life-saving immunisations using conditional cash transfers delivered through mobile money. In Sindh province, the region where the program is being tested, one out of every two children fail to get their full set of immunizations. If this program is successful, it may prevent thousands of children's lives who still die unnecessarily in Pakistan from vaccine-preventable diseases like polio and measles.

Case Studies

GIF's investments are producing immediate impact across diverse sectors and regions by targeting the world's poorest. Highlighted below are three investments that demonstrate GIF's flexible, innovative approach to early-stage investing.

Babban Gona

Babban Gona is a social enterprise that serves networks of smallholder farmers with a model created to attract youth. Members receive training, credit, agricultural inputs, marketing support, and other key services.

mClinica

mClinica connects pharmacies to drive improved public health. Through their mobile technologies mClinica is growing a digital network of pharmacies that generates new health data, improves linkages within fragmented supply chains and builds industry capacity.

EM3

EM3 has developed a first of its kind solution to tackle the access to mechanisation challenges of the Indian smallholder farmer. By utilising technology and an innovative business model to formalise and improve upon existing informal service channels, EM3 is making farming mechanisation affordable for the first time to millions of rural poor Indian farmers.

Babban Gona

Babban Gona is a social enterprise that serves networks of smallholder farmers with a model created to attract youth. Members receive training, credit, agricultural inputs, marketing support, and other key services. Besides increasing each farmer's yield and net income by 3.8 times the national average, the Babban Gona franchise demonstrates that the smallholder farming sector is a viable model for investment, capable of attracting new capital.

The innovation

Nigeria is a country of contrasts: it is Africa's largest economy, it has a booming, vibrant entrepreneurial sector; it is one of the continent's largest oil producers; and it has a growing middle class. On the other hand, Nigeria continues to struggle with large pockets of fragility and extreme poverty, a growing youth population, and a lack of jobs. These all contribute to instability and two insurgencies: Boko Haram in the North and continued violence in the Niger Delta.

The agricultural sector in Nigeria is critical to the country's economic wellbeing, accounting for 22% of GDP and employing an estimated 58% of the country's active work force. The sector is predominantly made up of smallholder farmers, who produce over 70% of the nation's food and own over 80% of all agrarian land – however, in the face of challenges such as low economies of scale, lack of finance for key inputs, poor knowledge of best farming practices, low yields, limited storage capacity and restricted access to formal markets, many smallholders continue to live on less than $2 a day. Raising crop yields, improved storage capabilities, and access to finance will help increase small holder farmers' incomes helping to contribute to stability, job creation, and economic growth.

Babban Gona is an innovative and comprehensive agriculture franchise model that seeks to sustainably improve the lives of smallholder farmers through the provision of end-to-end farming services. Babban Gona operates in rural northern Nigeria—an area, where it provides farmers with all they need to thrive, be it inputs, know-how, harvesting services or storage. This enables smallholder farmers to increase yields, lower their production costs, and gain a higher price for their crop. Through Babban Gona's model, each farmer receives a net income of $542, which is 3.8 times greater than that of the average smallholder. Over the last four years the model has dramatically increased its reach and currently supports approximately 17,500 smallholder farmers. GIF's investment will help Babban Gona in its ambition to reach over 100,000 farmers by 2020.

GIF's Investment

GIF provided Babban Gona with a $2.5 million subordinated debt investment as part of a $20 million debt raise. In taking a subordinate debt position, GIF agreed to lend in the local currency—Naira—and assumed the risk of devaluation. By doing so, GIF de-risked the investment for other investors who came in with USD-denominated debt.

Achieving Impact

- **Grow to over 100,000 smallholder members by 2020, representing over 77,000 hectares of land**
- **Attract approximately $30m of additional debt to finance expansion plans**
- **Improve sustainability of scale plans through introducing new products and services that boost the profitability of the business model**
- **Collect rigorous evidence of impact through conducting a two season cycle randomised control trial**

Meet the Entrepreneur

In 2007, Kola Masha moved from the US to Nigeria, his childhood home, to join Notore, a high impact early stage agro-allied company based in Port-Harcourt. It was at Notore, located in the heart of the Niger Delta, that Kola witnessed first-hand how insecurity manifested. Kola realised that as oxygen is to fire, so are unemployed youth to insecurity, and there a lot of unemployed youth in the country of Nigeria.

In Nigeria alone, a wave of 20 million youth entering an oversaturated labour force in the last twenty years caused youth unemployment to skyrocket, triggering not 1, not 2, but 3 insurgencies. With a median age of 18, half of Nigeria's population —about 80 million people— are under the age of 18 and will be joining the workforce within the next 20 years. If this wave of 20 million youth helped trigger Niger-Delta militancy, the Fulani herdsmen crisis and Boko Haram, just imagine what will 4 times that number do.

To do his part to solve the challenge, in 2012 Kola moved to a small village in Northern Nigeria, an impoverished area most recently impacted by insurgencies and brutal bombings, with an idea. To halt the spread of insecurity by unlocking the power of agriculture as a job creation engine. Due to its high need for labour and low skill requirements, farming has the potential to create jobs and draw millions of young people into the sector.

This is where Babban Gona was launched, a business dedicated to empowering smallholder farmers to transition from subsistence to more productive and profitable commercial operations. This is accomplished by franchising thousands of farmer cooperatives across Northern Nigeria. Babban Gona delivers an integrated package of agronomic and financial training, farm inputs, and marketing services, on credit to each cooperative, enabling its members to increase the productivity and profitability of their farm enterprise.

If youth see farming as a profitable venture, then it would be harder for extremists to recruit them, offering a sustainable path to increased rural wealth and enhanced food security.

Who benefits

Alice Ibrahim: "I got to know about BG in 2015 through a friend and then I joined in 2016 with the aim of just having something to eat but I got more than what I wanted. I was able to get more yield than what I usually got. I was also able to pay my children's school fees as this was a challenge before now, which made some of my children drop out, but they all are now in school. Lastly I was able to obtain a cow from the money. I got this as a result of the good market provided by BG and I'm hoping that the cow will give birth to more young ones which of course I will sell and get other big cows."

Hajara Luka: "I should be among the first set of people that joined BG when it came to our community in 2013. And ever since, my life has changed for the best. I have benefited from BG in several ways; I have been able to increase my farm size over the years, got more yield and money of which has made me more independent. Currently, I am a last mile distributor (LMD) and I have been saving the profits I get from the sales of fertiliser with a view of sending my children to a university. As a result of my improved standard of living, other members of my community picked up interest in BG and joined."

Bello Musa: "Joining BG was a breakthrough for me. I had nothing before but today I am a proud owner of a house and a land and all this was bought from the money I got from BG. In terms of yield, I used to get less than 20 bags in a 0.9ha but last year that I cultivated, I had 48 bags, gave BG its minimum and still had some to keep at home."

Danladi Bala: "Before joining BG, I used to be a motorcycle driver having difficulty surviving. But joining BG opened door for me as I had access to proper training, low cost, high quality inputs and good market which in turn enabled me get better yield and more money to fend for myself. I bought another motorcycle from the money I realised as a BG member and have food to eat with my family and today I can refer to myself as a successful farmer."

mClinica

mClinica connects pharmacies to drive improved public health. Through their mobile technologies mClinica is growing a digital network of pharmacies that generates new health data, improves linkages within fragmented supply chains and builds industry capacity. mClinca's platform currently connects over 18,000 pharmacies, making it the largest network in South East Asia.

The innovation

In middle-income countries such as Indonesia and the Philippines, persistent pockets of extreme poverty remain. Though these countries have seen broad development benefits due to increasing levels of wealth, those who remain poor have received few benefits. On the health side, low-income patients lack access to high quality, low cost pharmacy services. The pharmacy market is fragmented and most pharmacies operate at a low technical capacity. For the consumer this means it is often hard to fill a prescription due to limited stock, higher prices, and mistakes in providing the right drug prescribed. Those who live in extreme poverty face the biggest hurdles as health consumers. Moreover, for the healthcare provider or policy-maker, there is a lack of information on what pharmacies are selling and how their customers are behaving. This makes it difficult to make data-driven decisions that could improve public health outcomes.

mClinica's growing digital network of pharmacies tackles these challenges with cutting edge mobile technology. mClinica's e-prescription software, Snap, enables pharmacies to quickly digitise patient records through mobile phones. This previously untapped source of data enables analysis of key health trends in real time and garners insights that can advise healthcare policy and patient engagement strategies.

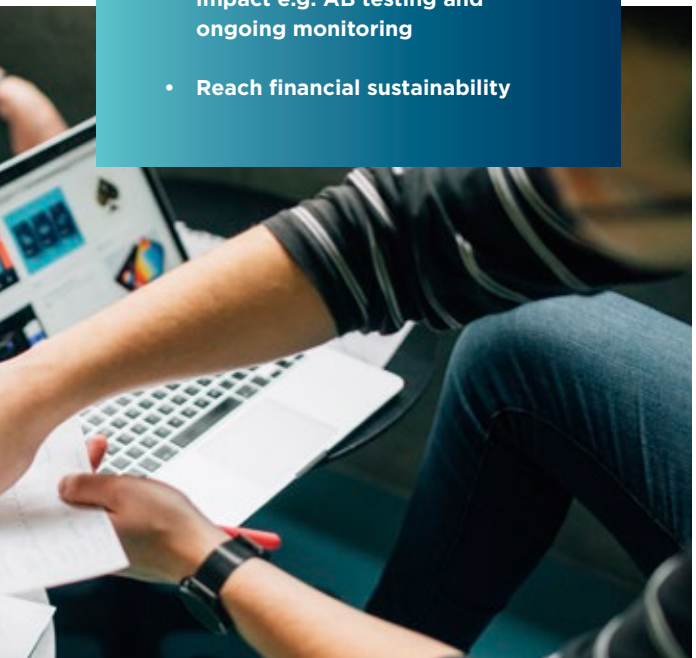
mClinica's networking application, SwipeRx, acts like a 'LinkedIn' for pharmacy professionals. Users benefit from an array of features, most notably; industry updates from leading public health institutions, continuing professional education modules, drug information directories and streamlined stock procurement. With 60,000 pharmacy professionals actively using the platform and growing, the network is helping a previously fragmented industry connect and ultimately improve its services.

GIF's Investment

GIF made a $2 million equity investment in mClinica.

Achieving Impact

- **Build a digital network of over 30,000+ pharmacies, handling 100 million + patient records**
- **Generate impact for low income patients through reduced healthcare expenditures, improved quality of prescriptions and improved regimen adherence.**
- **Share data and insights with the public health community to drive evidence based policy making**
- **Expand throughout South East Asia, including entering new markets in Vietnam, Cambodia, and Myanmar**
- **Grow internal capacity for quantifying and testing their impact e.g. AB testing and ongoing monitoring**
- **Reach financial sustainability**



Story of founder

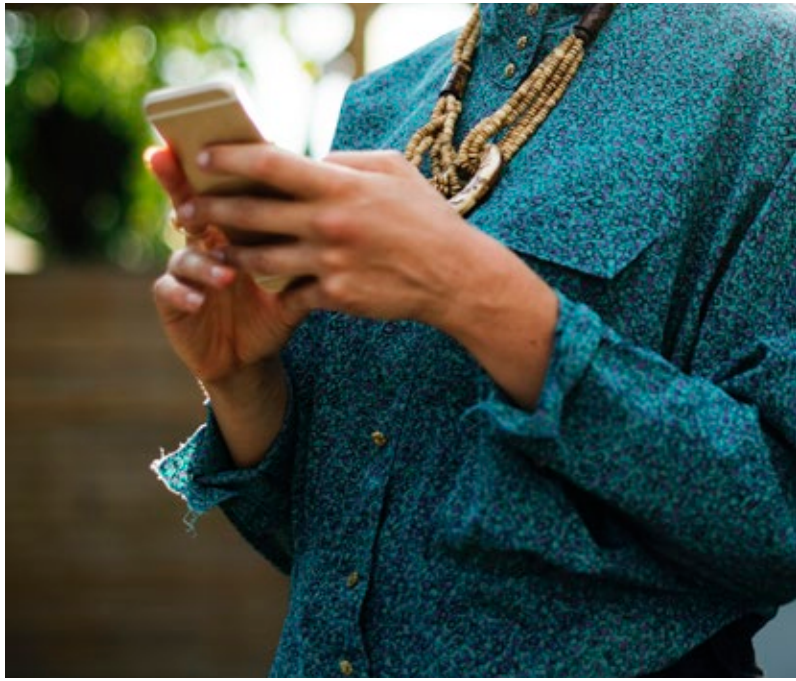
mClinica founder and CEO Farouk Meralli graduated with a Bachelors in Biomedical Sciences and International Development Studies from McGill University before going on to complete a Masters in Health Policy and Management from the Harvard School of Public Health.

Meralli has since gone on to work in both the public sector and pharmaceutical sides of public health. He held senior roles in strategy and product development at global pharmaceutical companies Pfizer, Sanofi, and Roche and also worked for several global NGOs. At the age of 17, he even started his first non-profit, Borderless World Volunteers, which he continues to help lead to the present day.

Across his public and private sector healthcare work, Meralli witnessed how fragmented the pharmacy practice could be first-hand. This problem was particularly acute in Asia's emerging markets, where more than 90% of the pharmacy outlets were independent community pharmacies in some countries.

To address the fragmentation of pharmacies in Asia's emerging markets, Meralli founded mClinica. Since its founding, the healthcare company has connected pharmacies across Southeast Asia - beginning in the Philippines, before expanding across Southeast Asia to Singapore, Malaysia, Vietnam, Thailand, and Indonesia - through a common mobile technology platform.

mClinica's impact has been substantial and far-reaching: The company's platforms now connect 15,000 pharmacies and 55,000 pharmacy professionals, who can reach over 80 million patients every month. For his work with mClinica, Meralli has been recognized as an Endeavor Fellow and awarded a Public Health Innovator Award from alma mater Harvard University - the youngest such recipient in the award's history.



Story of beneficiaries

In Indonesia, pharmacist Elita operates a small community pharmacy in a remote province of the country. Prior to mClinica, she had to travel for 6 hours each way on a crowded bus, leaving her two young children alone at home, to attend continuing professional education courses so that she could keep up her pharmacist license.

With mClinica, she was able to take the course on her mobile phone, a first for all pharmacists in the country. She was able to learn the latest developments in the pharmacy practice to serve her patients better, all while staying at home with her children. Every day she has the opportunity to better educate herself, collaborate and connect with colleagues, and become a better pharmacist. Elita is just one of the 55,000 pharmacy professionals who entrusts their professional development and networking to mClinica.

EM3

EM3 has developed a first of its kind solution to tackle the access to mechanisation challenges of the Indian smallholder farmer. By utilising technology and an innovative business model to formalise and improve upon existing informal service channels, EM3 is making farming mechanisation affordable for the first time to millions of rural poor Indian farmers. EM3's platform offers on-demand, pay-per-use farm mechanisation services of harvesters, tractors and other farming equipment within the Indian states of Madhya Pradesh and Rajasthan.

The innovation

India is an emerging middle-income country with a vibrant technology sector and a growing number of entrepreneurs. Yet, over 50% of Indians remain dependent on the agriculture sector for its livelihood, many of whom are small-holder farmers. Low productivity among these smallholder farmers contributes to high poverty rates among Indian farmers, with rice and wheat yields in India trailing global yields by 70%.

A significant barrier to inclusive growth and increased productivity is the lack of mechanised farming equipment, which is too expensive for most smallholder farmers. As a result, millions of farmers must rely on an informal and inefficient market of service providers that is both unreliable and unable to address large demand in peak seasons. This impacts farmers on a daily basis and creates significant knock-down effects contributing to continued poverty for many Indian farmers.

EM3's solution is a platform which allows smallholder farmers to access mechanised farm equipment affordably and efficiently. EM3 connects equipment owners with smallholder farmers in need of services, offering on-demand, pay-per-use services of harvesters, tractors and other farming equipment. Through EM3's platform, smallholder farmers can access end-to-end farming services such as land preparation, sowing and harvesting, all billed per acre or per hour. EM3's platform is delivered through a network of farm centres. Each centre is managed electronically and manned by agri-professionals, and is equipped to handle a wide range of basic and precision farm operations throughout the entire crop production cycle.

By utilising technology and an innovative business model to formalise and improve upon existing service channels, EM3 has created a platform where farmers and farms can benefit from the latest agricultural technology in an efficient and affordable manner. EM3's platform is transforming an informal and inefficient market into a transparent and efficient market that removes a key barrier to increased farmer productivity and economic growth. By improving access to mechanization, EM3's innovation will result in significantly improved yields, reduced costs and improved safety for smallholder farmers.

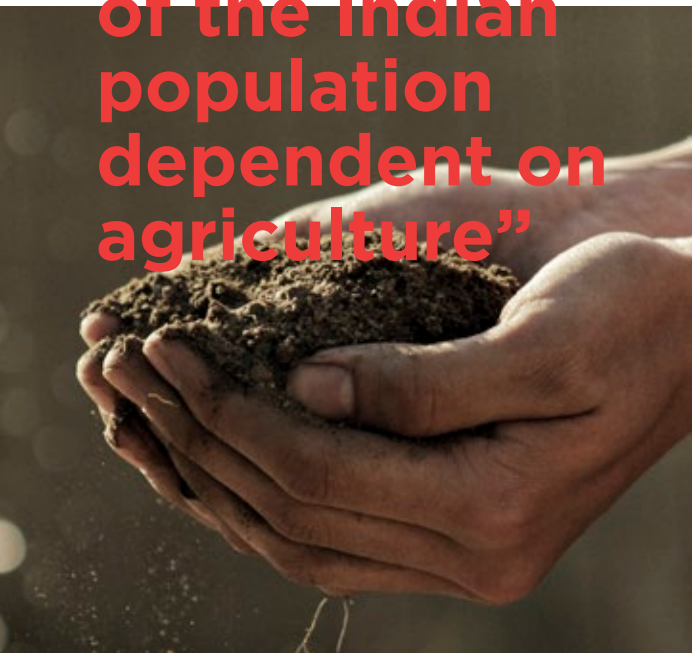
GIF's investment

GIF made a $7.4 million equity investment in EM3's series B round alongside Aspada Investment Company.

Achieving Impact

- **By the end of 2018, EM3 or its franchisees will own and operate 100 farm centres**
- **By the end of 2018, EM3 will have 387 active harvesters on its platform, and have serviced 250,000 acres of operations**
- **EM3 aims to reach 1.2 million farmers by 2021 and service over 5 million acres of land.**

"almost 60% of the Indian population dependent on agriculture"



Entrepreneur Story

Adwitiya, a trained economist with an MBA in Strategy and Finance, never imagined being an agriculturist. He was on-track for a senior management position with one of the world's largest insurance companies and was looking forward to an exciting, yet well-scripted corporate career.

At the same time, he carried an unrelenting entrepreneurial bug and a deep desire to come back to his homeland. While his heart drew him back to India, having lived overseas, he had seen how other counties had managed to deliver more uniform development to their people and, in contrast, the disparities that existed in India. He also saw that these disparities were at the root of many of the social issues plaguing his country.

With almost 60% of the Indian population dependent on agriculture and with the overwhelming majority of Indian farmers being small and marginal, he focused his entrepreneurial energies on addressing the needs of the Indian farmer.

With the vision to re-build the agricultural sector, he needed a good starting point. The disappearance of agricultural labour made the need for mechanisation a crying pain point, and the inability of the farmer to afford equipment made the pay-for-use format the optimal mechanism.

With this simple insight EM3 AgriServices was born, and Adwitiya and EM3 have been working tirelessly to sustainably redefine the way smallholders farm their land.

Beneficiary Story

"My name is Manish Kourav – I am 25 years old and I live in Gadarwara in Madhya Pradesh. I am part of a joint family with approximately 15 acres of land where I grow a wide variety of things like paddy, sugar cane, gram, and wheat. I have used EM3 for lots of different services, including things like ploughs and harvesters. Before I started using EM3 I relied on a few implements of my own, as well as things I borrowed from others in my village – but timely availability was a matter of chance. I also had to compromise on quality. Through EM3, I have been able to benefit from the availability of many quality services under one roof."

"My name is Shriram Kourav, I am 47 years old and I live in a village called Khairi in Gadarwara. I have some equipment of my own - for example I have two tractors – but maintaining these machines and also labour availability were problems for me. But thanks to EM3, these issues have been resolved. I am now able to use a four-wheel tractor rather than relying on my two-wheel model, and the EM3 ploughs are much more powerful than my own. When I compare my own costs to EM3's service charges, EM3 is also much better."

"My name is Nilesh Kourave, I am 23 years old and I live in the village of Mau in Gadarwara. I have four acres of land where I grow paddy, gram, and wheat. Before EM3 came along I used to borrow equipment from people in my village, but it was tricky to guarantee availability and I only have a small land holding. Thanks to EM3, I am no longer dependent on others for equipment and can call upon EM3's quality service anytime."

About Practical Impact

GIF wants to maximise its impact on the lives of people now living on less than $5/day. To do that, GIF places smart bets on innovations with great promise but short track records. To help make those bets smart, GIF created a system for forecasting, updating, and tracking the prospective impact of its projects and portfolio called Practical Impact.

Practical Impact addresses several challenges:

- How can we assess risk vs. impact trade-offs when impact information is – initially - limited?
- GIF builds evidence generation into its investments, to guide decisions about whether and how to scale them up. How can emergent evidence be used to update impact assessments?
- GIF invests across all seemingly incomparable sectors: agriculture, public health, energy, and more. Yet one way or another, we must choose which investments to support. Can we compare impact across sectors in a consistent, transparent way?
- GIF and its donors want to track the overall performance of its portfolio. How can this be done, when impacts at scale are years ahead? How can impacts be summed up across sectors and different kinds of outcomes?

Compared to other measures of impact

Practical Impact is designed to balance rigour with feasibility.

Practical Impact goes beyond a simple forecast of 'number of people reached.' That is a starting point. It can be added up across different sectors and project types. But it has two shortcomings. It doesn't capture depth of impact. "People reached" includes those who heard a radio message, and those whose life was saved. And this measure doesn't capture uncertainty about whether the innovation will, in fact, scale up.

Practical Impact is also designed to be a nimble approach useful in the low-data, early stage investments. In many of these contexts, there is not enough data or evidence to usefully compute a project's social return on investment, net present value or benefit-cost ratio. Indeed, GIF investments are often designed to quantify the measures of impact and cost-effectiveness that would feed into a more formal project economic analysis.

Practical Impact puts the potential for impact at the core of our investment process.

The nuts and bolts of Practical Impact

Impact =

Breadth of Impact

The number of low-income people who will benefit at year 10.

×

Depth of Impact

Benefit per person relative to annual income.

×

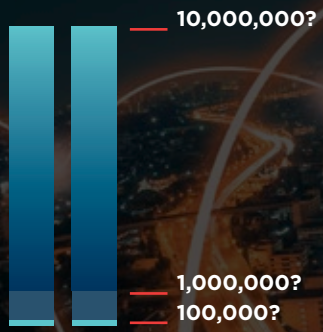
Probability of Success

The likelihood that the innovation will be successful in 10 years.

Practical Impact starts with **people impacted:** the number of people (living under $5 PPP/day) whose well-being will be affected by the project.

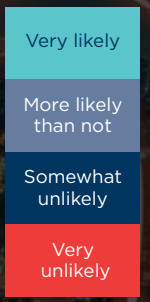
This number is then weighted by the **depth of impact.** This measures the relative impact of the innovation on a beneficiary, on a scale from barely perceptible to life-changing. So people x depth gives a measure of impact if the innovation is successful.

Finally, impact-if-successful is adjusted by the **probability of success.** Practical Impact is based on the idea that an order-of magnitude estimate is both feasible and useful.



How many people will benefit?

How big is the benefit per person?



What is the chance of success?

Time horizon for Practical Impact

For investment appraisal, Practical Impact Assessment is a snapshot of impacts that accrue in year 10 of the innovation's expansion. Why 10 years? GIF aims to support innovations that will diffuse widely in a society or economy. These innovations, if successful, typically follow an S-curve of adoption and influence. For both public and private sector innovations, the first five to seven years are a period of experimentation with product and market. Success at cost-effectively serving clients eventually attracts private sector investors or public-sector take-up. By year 10, the innovation is on the steep, explosive part of its growth curve. But beyond 10 years, there is too much uncertainty to put much structure on a forecast. So the year 10 forecast serves as a point of comparison among projects.

Depth of impact

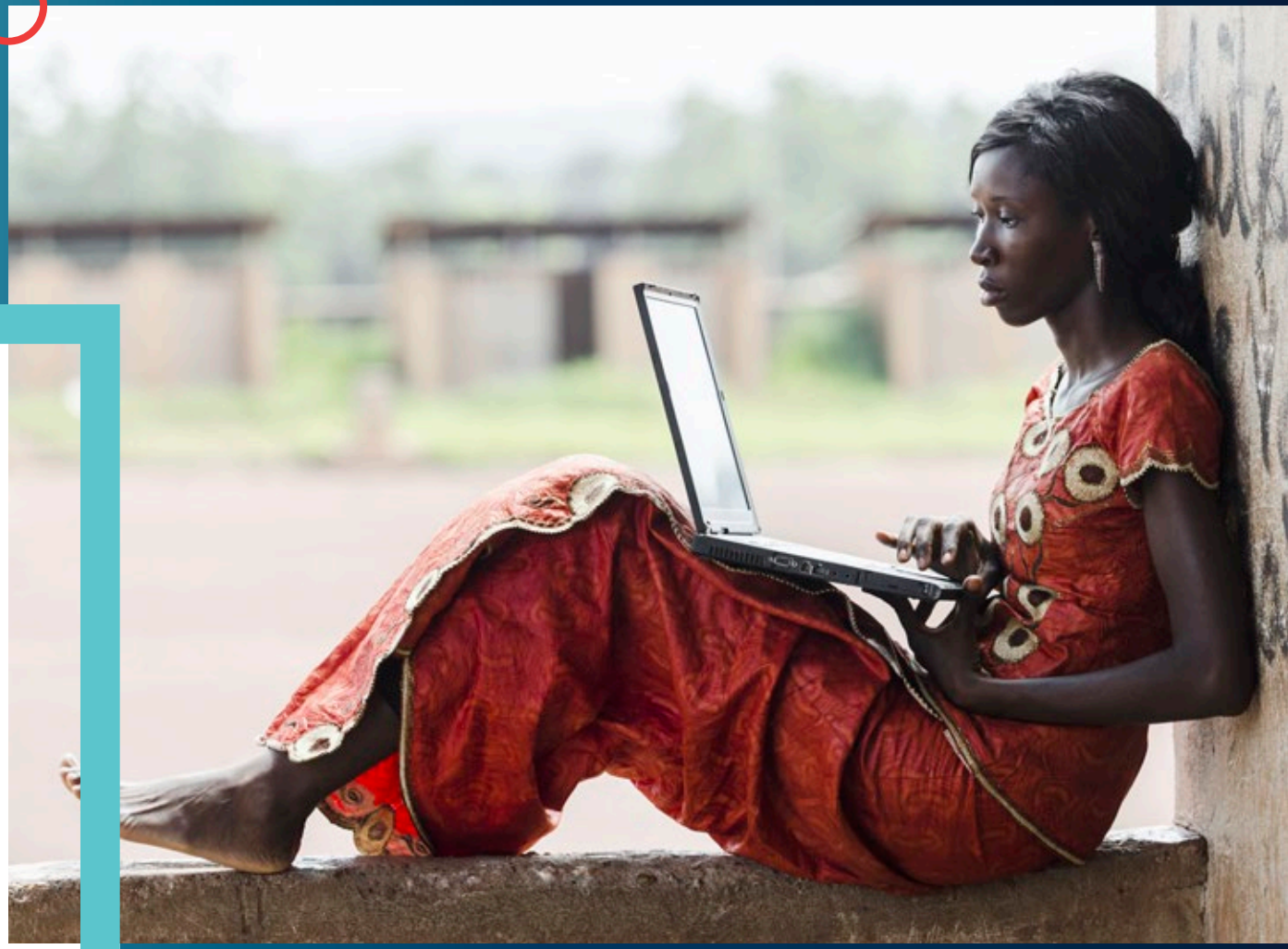
Practical Impact's central innovation is the introduction of a standardised depth scale. This is intended to capture all kinds of impact, economic and non-economic. Its scaffolding is a measure of relative benefit: from perceptible, to substantial, to transformative, to life-saving. This scaffolding is anchored in relative changes in income or consumption. So, for instance, a perceptible benefit is one that increases consumption by a few percent; a transformative one, by 100%.

Non-monetisable benefits can be mapped onto this scaffolding. For instance, consider a transport innovation that reduces commuting time for urban worker by 15 minutes a day. That is about two to three percent of the work day, and so is classified as a perceptible benefit. A year of education has noneconomic benefits, but by economic grounds alone it increases lifetime income by about 10%: a substantial benefit. There is a long tradition in economics of translating health gains into economic terms, based on trade-offs that individuals or societies make. This approach is brought over to Practical Impact.

Practical Impact measures impact from the perspective of the individual. For economic benefits, this is relative to an individual's annual income. The use of relative measures, rather than absolute dollar measures, is deliberate. Relative measures help us to focus more on the poorest. A $2/day gain is significant for someone living on $5/day, but life-transforming for the person living on $1.50.

Probability of success

Investment always requires risk assessment. This is particularly true for the early-stage, long-horizon innovations that GIF supports. Practical Impact encourages identification of the risk factors that an innovation faces during the current investment phase, and then on its subsequent path to scale. Risks during the current phase are often fundamental: can it actually be implemented in the field? If it passes those hurdles, the innovation then faces scale-up risks. Can it surmount market or political risks to wider take-up? Practical Impact quantifies the probabilities that: 1) an innovation meets the objectives of the current investment, and 2), if so, proceeds on towards scale. Many of the same factors enter the financial analysis of a for-profit investment.



Implementing Practical Impact

Practical Impact Assessment is built into GIF's project cycle. Rough, back-of-envelope Practical Impact Assessment is used as a positive screen by GIF's investment staff as they scan investment proposals. When a proposal is selected for further diligence, a rough Practical Impact outline helps to identify key areas for attention with respect to assessing impact. This involves sketching potential channels of impact, and the kind of information needed to estimate depth, breadth, and risks. Investment staff then flesh out the Practical Impact in the course of diligence. The level of effort is roughly proportional to the size and stage of the project. It is understood that pilot projects by their nature are more uncertain than other. Analytics staff provide technical assistance and an arm's length perspective on judgment calls on breadth, depth, and probability. Where useful, outside experts are consulted regarding key parameters or to cross check assumed channels of impact. GIF intends to use independent evaluators to cross-check Practical Impact on a sample basis.

Development Media International (DMI) Case Study: Practical Impact in action

1.

Maternal mortality reduction. In Burkina Faso and other Sahel countries, both fertility and maternal mortality rates are high. Many pregnancies are unplanned, and women express a desire for greater control over timing and number of pregnancies. Reduction in the number of unplanned pregnancies is expected to reduce risk of mortality.

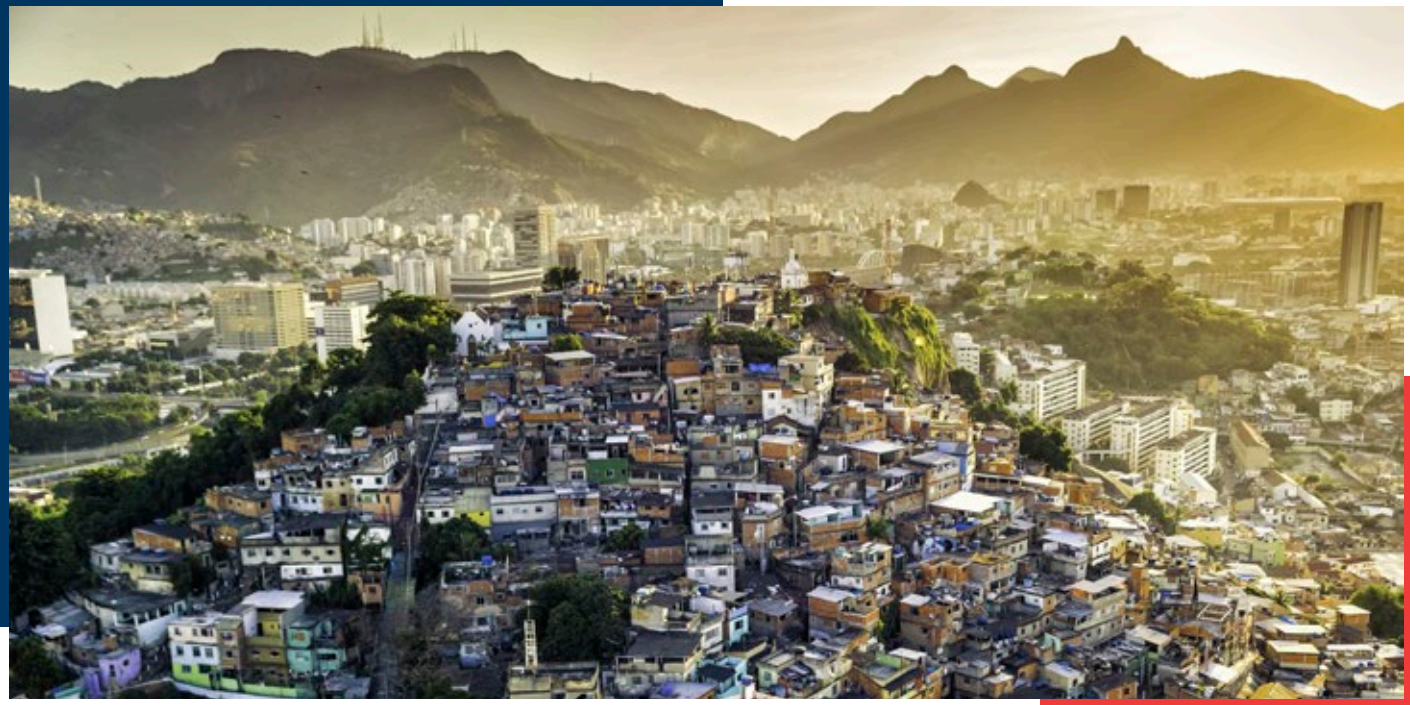
2.

Child mortality reduction. Spacing of less than 2 years between children is a strong risk factor for infant and child mortality. Cleland and others (2012) conclude that "a preceding interval of less than 2 years raises risk of death at ages 1–4 years by about 40%". Adoption of modern contraception would be expected to increase spacing, but Cleland and others note that evidence of this impact is lacking.

3.

Greater investment in girls. Two papers argue that widespread adoption of contraception has a society-wide impact of boosting educational and other investments in girls, even by parents that do not themselves uses contraceptives. The argument is that returns to investment will be higher because girls will have longer and better employment prospects. Angeles and others (2005) quantify the impact as an extra year of education for Indonesian girls. Babiarz and others (2017) report an impact of an additional half year for Malaysian girls.

Practical Impact aims to capture the primary channels of impact but does not attempt to be fully exhaustive. There are other ways in which DMI's innovation may improve women and girls' lives: by increasing female empowerment, earnings and employment, and possibly reducing child stunting.



Breadth and depth of impact

If the experiment is successful, DMI believes that prospects for national-level scale-up up are good. Most governments already have family planning promotional programs in place, so there are no steep political or social barriers and international donors are favourably disposed to support these programs. The programs are relatively simple and inexpensive to implement, compared to many interventions, because they mainly involve support to central broadcasting organisations. Moreover, the likelihood of external validity is high because the innovation tackles basic issues of information and motivation, with built in feedback for tailoring appropriate messages. We assume each of the target countries has an independent 50% chance of adopting the innovation.

GIF estimates the total number of mothers' lives saved and children's lives saved by reducing unplanned pregnancies and improving child spacing. These calculations take into account many factors including the effectiveness of the program in increasing contraceptive take-up, country-level contraceptive usage rates as well as maternal and child mortality rates.

From a total reach of 186 million people listening to radio messages, this yields about 500 mothers and 500 children whose lives are saved. These assumptions are conservative if new adopters are motivated by higher-than-average fertility rates and mortality risk. We apply a depth of impact of 50 which corresponds to a life saved according to our framework.

For channel 3, we estimate the number of girls in an age-six cohort who will benefit through increased investment in their education. We used a similar approach as above, combining population data from the UN and assuming not all target countries necessarily take up the radio messages. This yields around 3 million young girls living in countries that take up the radio messages.

Channel 3 is plausible but highly speculative. While the evidence above suggests that girls in Indonesia gained a full year of school and girls in Malaysia gained a half-year of school, we conservatively estimate girls will only benefit by one-twentieth (5%) of a school year, which also corresponds to a depth of impact of 0.05.

Estimates of Potential Impact at Year 10

	Breadth	Depth	Impact if successful
Channel 1: Maternal mortality	About 500 mothers…	…whose life is saved (50)	25,000
Channel 2: Child mortality	About 500 children…	…whose life is saved (50)	25,000
Channel 3:	About 3 million girls…	…. who gain about 5% of an additional school year	150,000
Greater investment in girls' education		(.05)	
		Total Impact if successful	200,000
		Probability of success	x 51%
		Expected Impact	**102,000**

Probability of Success

GIF identifies the risks to scale for each project and then aims to place probabilities on the likelihood of success. We decompose the risks into two stages: risks during the investment stage and post-investment to year 10.

GIF judges the key risks during the investment stage to be moderately low. Non-experimental evidence supports the efficacy of the intervention and DMI's field experience in Burkina Faso argues for relatively low implementation risk. Pegging each risk at an independent 80% chance of success, there is a roughly 64% chance that the project demonstrates the hoped-for result.

If the experiment is successful, there are then some hurdles to widespread implementation. There is a risk that neither DMI nor any similar organisation is in a position to advocate for and implement the programs. There is also a risk of a general decline, among global funders, in pursuing family planning. GIF believes that these risks are relatively low, assessing that there's roughly an 80% chance that the radio messages will be adopted if the first investment stage is successful.

Combining the first stage risk (64%) with the second stage risk (80%) yields a cumulative probability of success of about half (51%).

"We use our risk-tolerance to support early-stage innovations to prove their impact model."

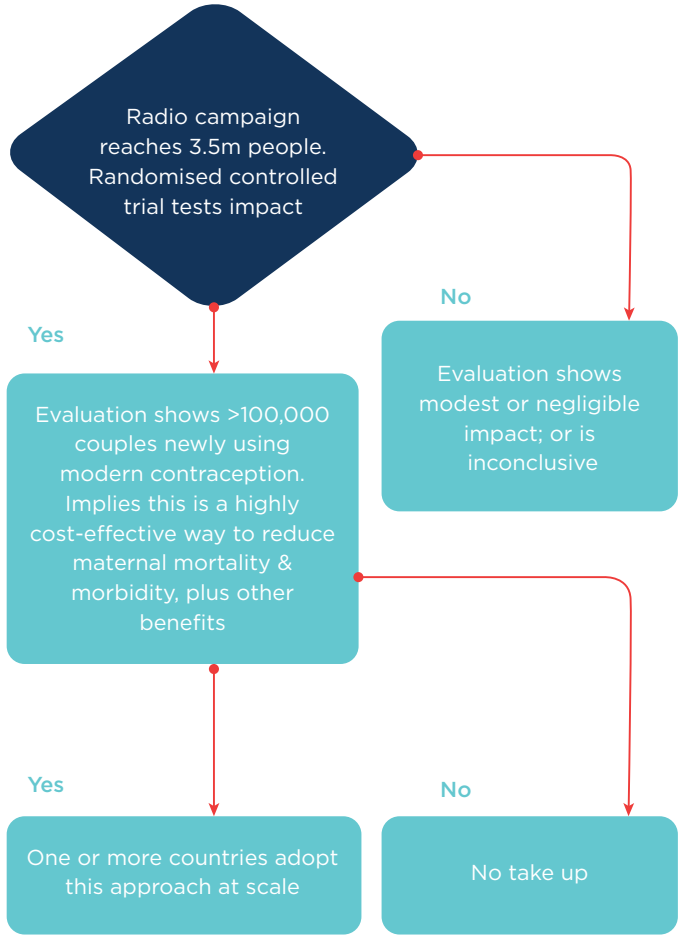
Example of quantitative risk analysis for DMI

Risks during the investment

- Does the innovation work?
- Is the evaluation adequately powered?
- Campaign executed as planned?

Risks post-investment

- Political support for program
- Sustainable financing?
- Campaigns executed as planned?



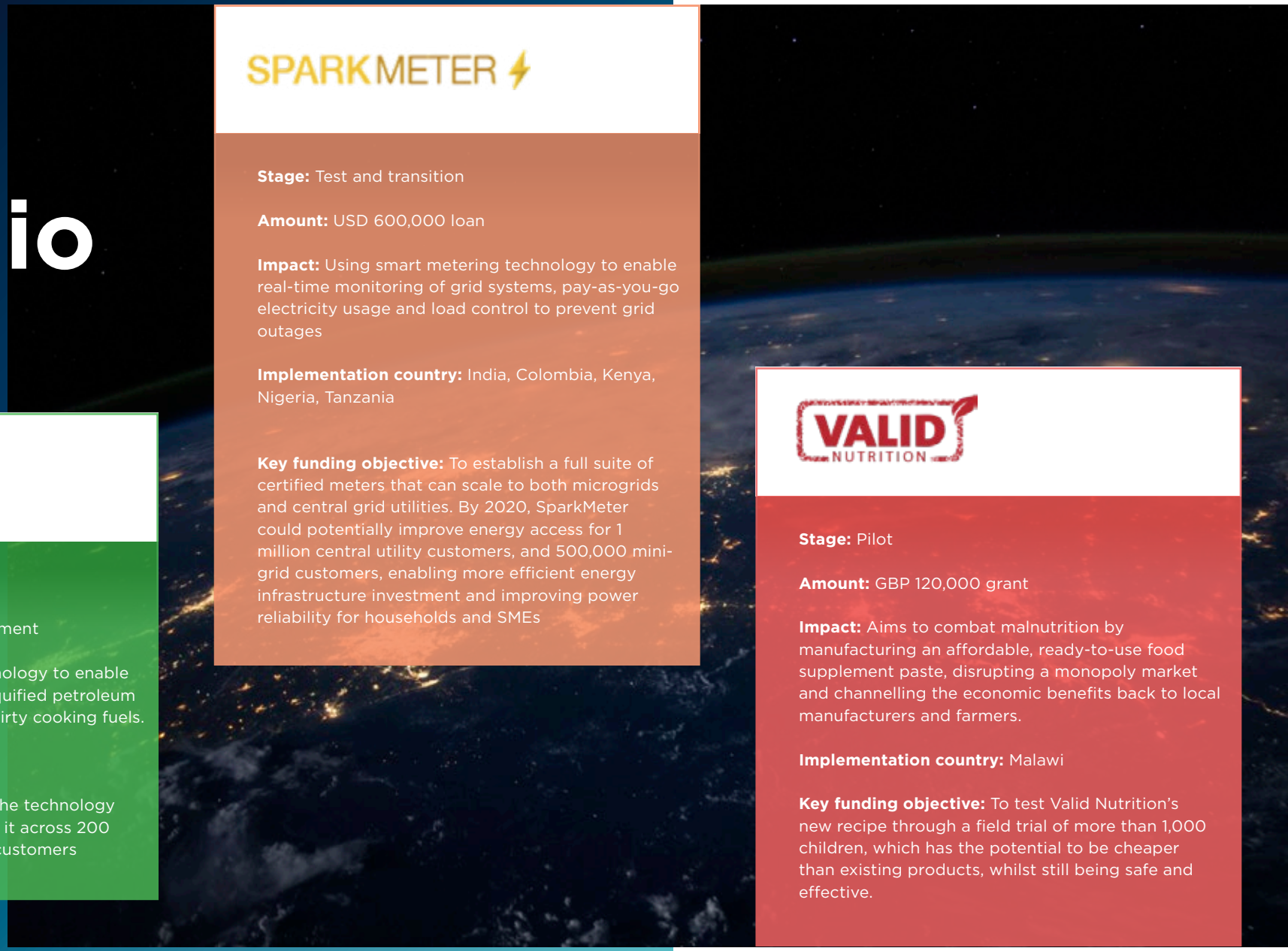
Practical Impact Methodology Development and Prospects

During 2017, GIF focused on refining the methodology and integrating Practical Impact into the investment process. This included developing standard procedures and parameters. A draft methodology manual was developed for internal use and externally reviewed. It is being revised with the expectation of general publication. Early Practical Impact estimates were revisited to ensure consistency with the codified procedures. Projects that predated the methodology were fitted with Practical Impact estimates.

There is widespread interest in Practical Impact Assessment in the development and impact investment community. During the latter half of 2017, GIF presented practical impacts in over 20 different fora: to aid agencies, development finance institutions, foundations and impact investors. Those discussions allowed us to integrate lessons from other practitioners and better understand how we could contribute to solving the shared challenges of impact assessment.

GIF plans to further develop and disseminate Practical Impact during 2018. Improvements to be explored include human-centred-design of a template that facilitates documentation and auditing of assumptions and calculations; guidance on default parameters for risk, depth, and rate of diffusion; and streamlined expert inputs.

Our portfolio



PAYGO ENERGY

Stage: Pilot

Amount: USD 230,000 debt investment

Impact: Using pay-as-you-go technology to enable affordability and access to clean liquified petroleum gas, thereby reducing reliance on dirty cooking fuels.

Implementation country: Kenya

Key funding objective: To finalise the technology supporting this innovation and test it across 200 households, reaching around 900 customers

SPARKMETER

Stage: Test and transition

Amount: USD 600,000 loan

Impact: Using smart metering technology to enable real-time monitoring of grid systems, pay-as-you-go electricity usage and load control to prevent grid outages

Implementation country: India, Colombia, Kenya, Nigeria, Tanzania

Key funding objective: To establish a full suite of certified meters that can scale to both microgrids and central grid utilities. By 2020, SparkMeter could potentially improve energy access for 1 million central utility customers, and 500,000 mini-grid customers, enabling more efficient energy infrastructure investment and improving power reliability for households and SMEs

VALID NUTRITION

Stage: Pilot

Amount: GBP 120,000 grant

Impact: Aims to combat malnutrition by manufacturing an affordable, ready-to-use food supplement paste, disrupting a monopoly market and channelling the economic benefits back to local manufacturers and farmers.

Implementation country: Malawi

Key funding objective: To test Valid Nutrition's new recipe through a field trial of more than 1,000 children, which has the potential to be cheaper than existing products, whilst still being safe and effective.

simprints
every person counts

Stage: Pilot

Amount: GBP 150,000 grant

Impact: To enable the one billion people who lack official identity documentation to be formally 'identified' via an open-source biometric identity system, unlocking the financial and health rights that go with formal identification.

Implementation country: Bangladesh and Nepal

Key funding objective: To support the sustainable deployment of Simprints' biometric identity hardware and software products with frontline community workers, with an ambition to reach hundreds of thousands of people by 2020.

newborn foundation

Stage: Pilot

Amount: USD 224,600 grant

Impact: To test whether neonatal mortality can be cost-effectively reduced by screening all newborns for their blood oxygen level, allowing for earlier diagnosis of easily treatable infections.

Implementation country: China, Philippines

Key funding objective: To pilot the pulse oximetry technology by screening 50,000 newborns and, if proven to be a cost effective way to save lives at birth, the ambition is to promote adoption in national level screening programs.

myAGRO

Stage: Pilot

Amount: USD 225,000 grant

Impact: Improve farmers' incomes by enabling them to layaway money for improved seeds and fertilizer, as well as training farmers in improved agronomic practices. Pilot with 1,500 farmers. MyAgro as a whole reached 17,000 farmers this year.

Implementation country: Mali

Key funding objective: To test whether offering myAgro products to Village Saving and Loan Associations is a more cost effective path to scale for myAgro than their core model of directly recruiting farmers

SEGOVIA

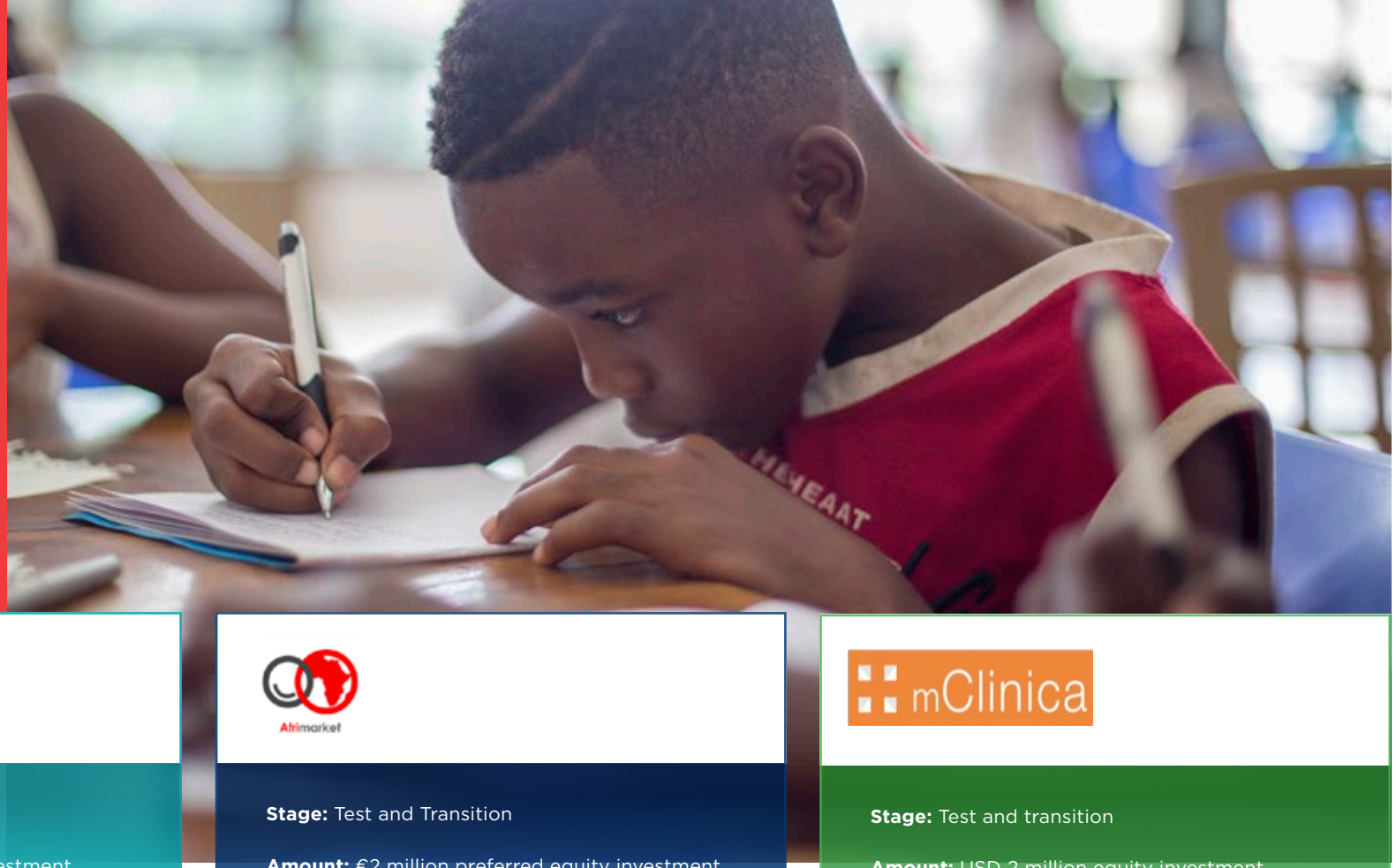
Stage: Test and Transition

Amount: USD 750,000 equity investment

Impact: To radically improve the efficiency of aid by making it faster, cheaper, and more secure to transfer funds directly to vulnerable populations.

Implementation country: Kenya, Uganda, Pakistan and other countries with cash transfer programs.

Key funding objective: To test the efficacy of Segovia's software in reducing operations costs, fraud, leakage and mis-targeting of funds, and to roll out cash transfer implementation across a number of clients with an ambition to reach hundreds of thousands of people.



simpanetworks
radical affordability

Stage: Test and Transition

Amount: USD 2.3 million equity investment

Impact: An off-grid pay-as-you-go model that combines both financial inclusion and clean energy access, giving choice to rural families in India.

Implementation country: India

Key funding objective: To expand geographically into thousands more villages and towards its goal of 10 million solar rooftops sold by 2020, reaching over 1 million households.

Afrimarket

Stage: Test and Transition

Amount: €2 million preferred equity investment

Impact: Afrimarket tackles the high costs and trust issues associated with remittances by providing a low-cost, no-middleman cash-to-goods remittance service to West Africa. As of 2017 Afrimarket serves 17,000 customers.

Implementation country: Cote d'Ivoire, Senegal, Benin, Togo and Cameroon

Key funding objective: To build out their distribution operations, raise their profile and acquire new customers.

mClinica

Stage: Test and transition

Amount: USD 2 million equity investment

Impact: Utilising big data to increase the availability and affordability of essential medicines in South East Asia and subsequent adherence to regimens

Implementation country: The Philippines, Malaysia, Vietnam, Thailand, Cambodia, Laos

Key funding objective: To expand mClinica's digital network of pharmacies, reduce the cost of essential medicines and improve health outcomes for the poor in South East Asia

IRD

Stage: Test and Transition

Amount: USD 856,215 grant

Impact: To find the most cost-effective way to ensure parents complete all required immunization vaccines for children under 2 years old. In Pakistan alone, an estimated 9-13 million children under the age of 2 have not received age-appropriate immunization coverage.

Implementation country: Pakistan

Key funding objective: To support a three-year randomised control trial designed to find the optimal incentive amount, schedule, and design, to achieve a higher immunization rate in the most cost-effective way. A total of 6,400 children age 0 - 23 months visiting an immunisations centre or contacted during outreach activities for any one of the routine immunisations will be helped.

DMI

Stage: Test and Transition

Amount: GBP 1.5 million grant

Impact: To use a radio-based mass media campaign to encourage the use of modern contraceptives by taking on the cognitive barriers and social norms that prevent uptake.

Implementation country: Burkina Faso

Key funding objective: To rigorously test the impact of a low-cost, high frequency, radio-based family planning campaign, with ambition for approximately 100,000 couples to begin using contraceptive methods

EDUCATE!

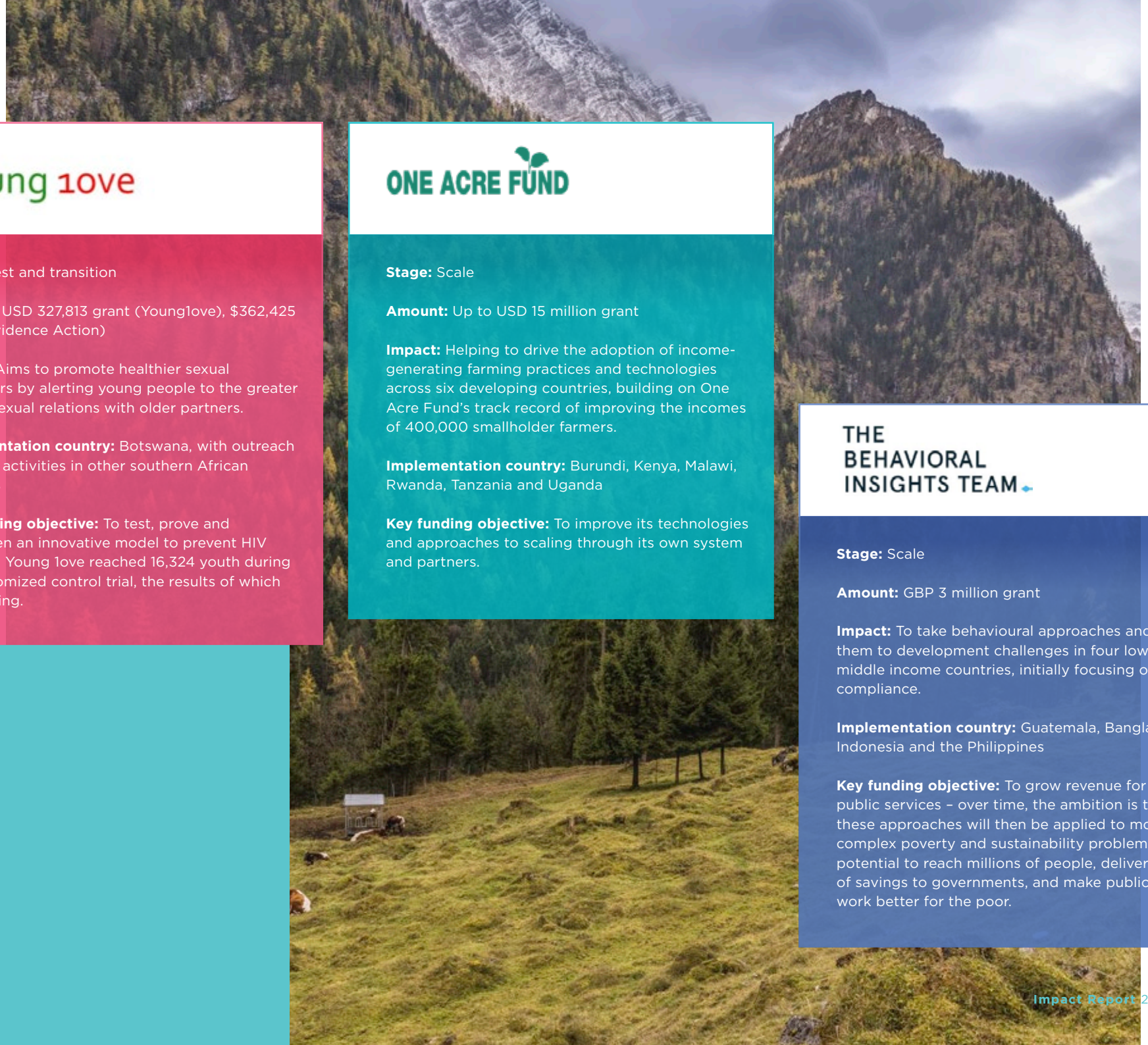
Stage: Test and Transition

Amount: USD 300,000 grant

Impact: To tackle the issue of unemployment in sub-Saharan Africa head-on by providing young people with leadership, entrepreneurship and workforce readiness skills training.

Implementation country: Uganda

Key funding objective: To support the testing, expansion and government adoption of the Educate! skills-based education program.



Young 1ove

Stage: Test and transition

Amount: USD 327,813 grant (Young1ove), $362,425 grant (Evidence Action)

Impact: Aims to promote healthier sexual behaviours by alerting young people to the greater risks of sexual relations with older partners.

Implementation country: Botswana, with outreach and pilot activities in other southern African countries

Key funding objective: To test, prove and strengthen an innovative model to prevent HIV infection. Young 1ove reached 16,324 youth during the randomized control trial, the results of which are pending.

ONE ACRE FUND

Stage: Scale

Amount: Up to USD 15 million grant

Impact: Helping to drive the adoption of income-generating farming practices and technologies across six developing countries, building on One Acre Fund's track record of improving the incomes of 400,000 smallholder farmers.

Implementation country: Burundi, Kenya, Malawi, Rwanda, Tanzania and Uganda

Key funding objective: To improve its technologies and approaches to scaling through its own system and partners.

THE BEHAVIORAL INSIGHTS TEAM

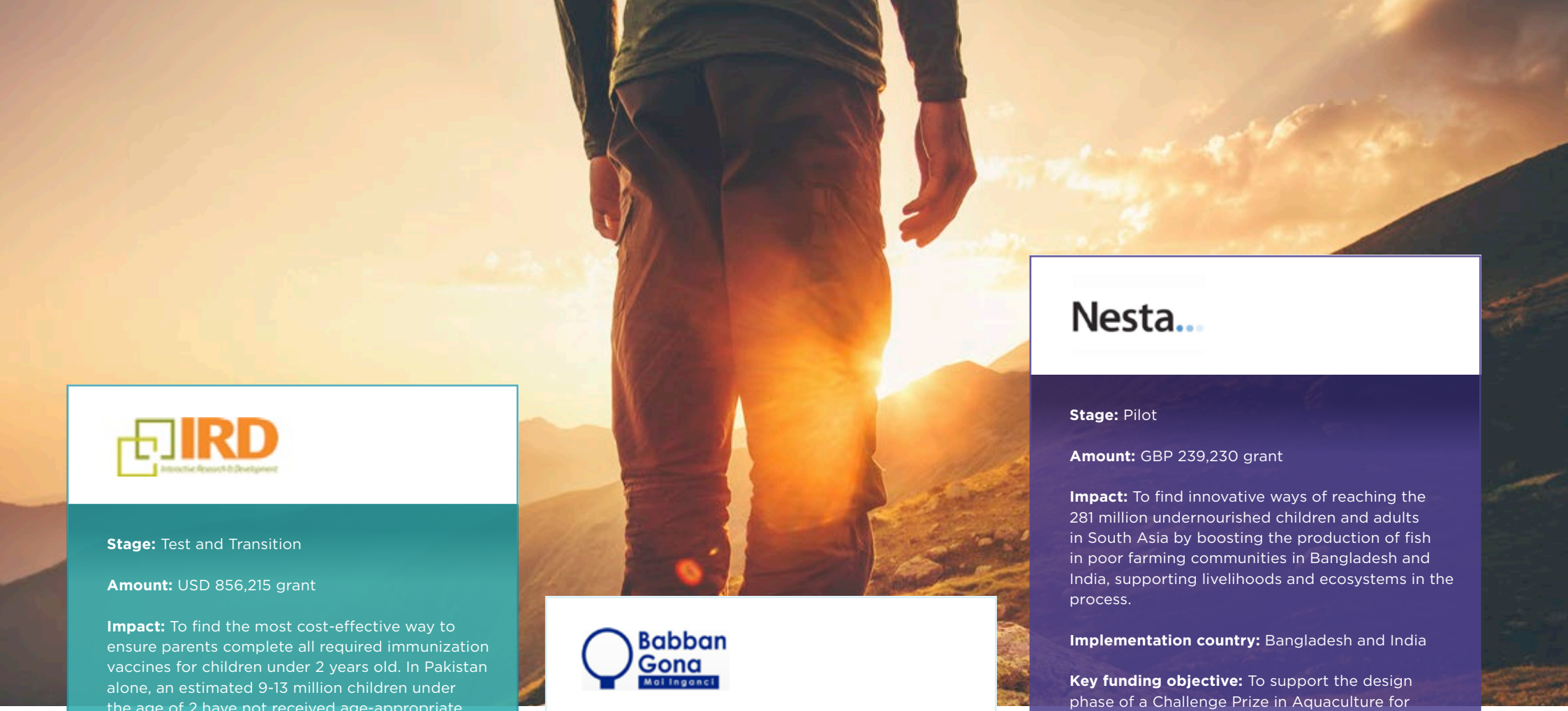
Stage: Scale

Amount: GBP 3 million grant

Impact: To take behavioural approaches and apply them to development challenges in four lower-middle income countries, initially focusing on tax compliance.

Implementation country: Guatemala, Bangladesh, Indonesia and the Philippines

Key funding objective: To grow revenue for essential public services – over time, the ambition is that these approaches will then be applied to more complex poverty and sustainability problems, with potential to reach millions of people, deliver billions of savings to governments, and make public services work better for the poor.



IRD

Stage: Test and Transition

Amount: USD 856,215 grant

Impact: To find the most cost-effective way to ensure parents complete all required immunization vaccines for children under 2 years old. In Pakistan alone, an estimated 9-13 million children under the age of 2 have not received age-appropriate immunization coverage.

Implementation country: Pakistan

Key funding objective: To support a three-year randomised control trial designed to find the optimal incentive amount, schedule, and design, to achieve a higher immunization rate in the most cost-effective way. A total of 6,400 children age 0 - 23 months visiting an immunisations centre or contacted during outreach activities for any one of the routine immunisations will be helped.

Babban Gona
Mai Ingonci

Stage: Test and Transition

Amount: USD 2.5 million debt

Impact: To improve net incomes for smallholder farmers by providing end to end agricultural services

Implementation country: Nigeria

Key funding objective: To expand the number of farmers reached to 190,000 by 2021

Nesta

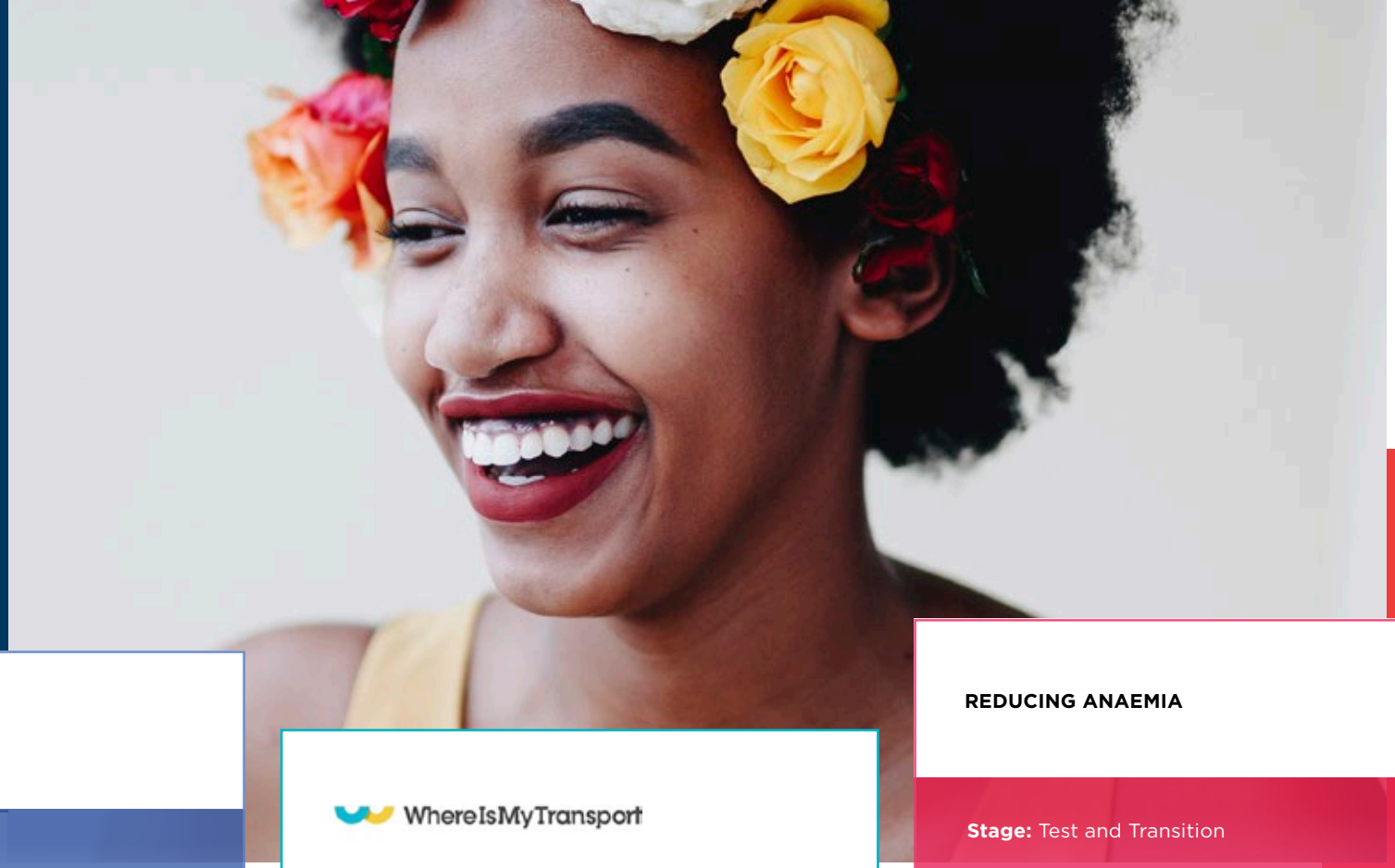
Stage: Pilot

Amount: GBP 239,230 grant

Impact: To find innovative ways of reaching the 281 million undernourished children and adults in South Asia by boosting the production of fish in poor farming communities in Bangladesh and India, supporting livelihoods and ecosystems in the process.

Implementation country: Bangladesh and India

Key funding objective: To support the design phase of a Challenge Prize in Aquaculture for Global Development.



isle

Stage: Test and transition

Amount: USD 178,015 service agreement

Impact: Seeks to introduce a market linkage in Africa for water utilities, technology providers, and regulators to deliver wide-scale impact to beneficiaries in Africa.

Implementation country: Africa

Key funding objective: To contribute towards Isle's project fees of piloting its model in Africa, including financing for an initial scoping piece of work, managing two meetings, and a limited amount of follow up support.

WhereIsMyTransport

Stage: Test and Transition

Amount: GBP 560,000 simple agreement for future equity agreement

Impact: A transport technology company that provides governments and transit operators with an open data platform for the integration of formal and informal transit data.

Implementation country: South Africa

Key funding objective: Help to improve African mass transit in line with GIF's target beneficiaries.

REDUCING ANAEMIA

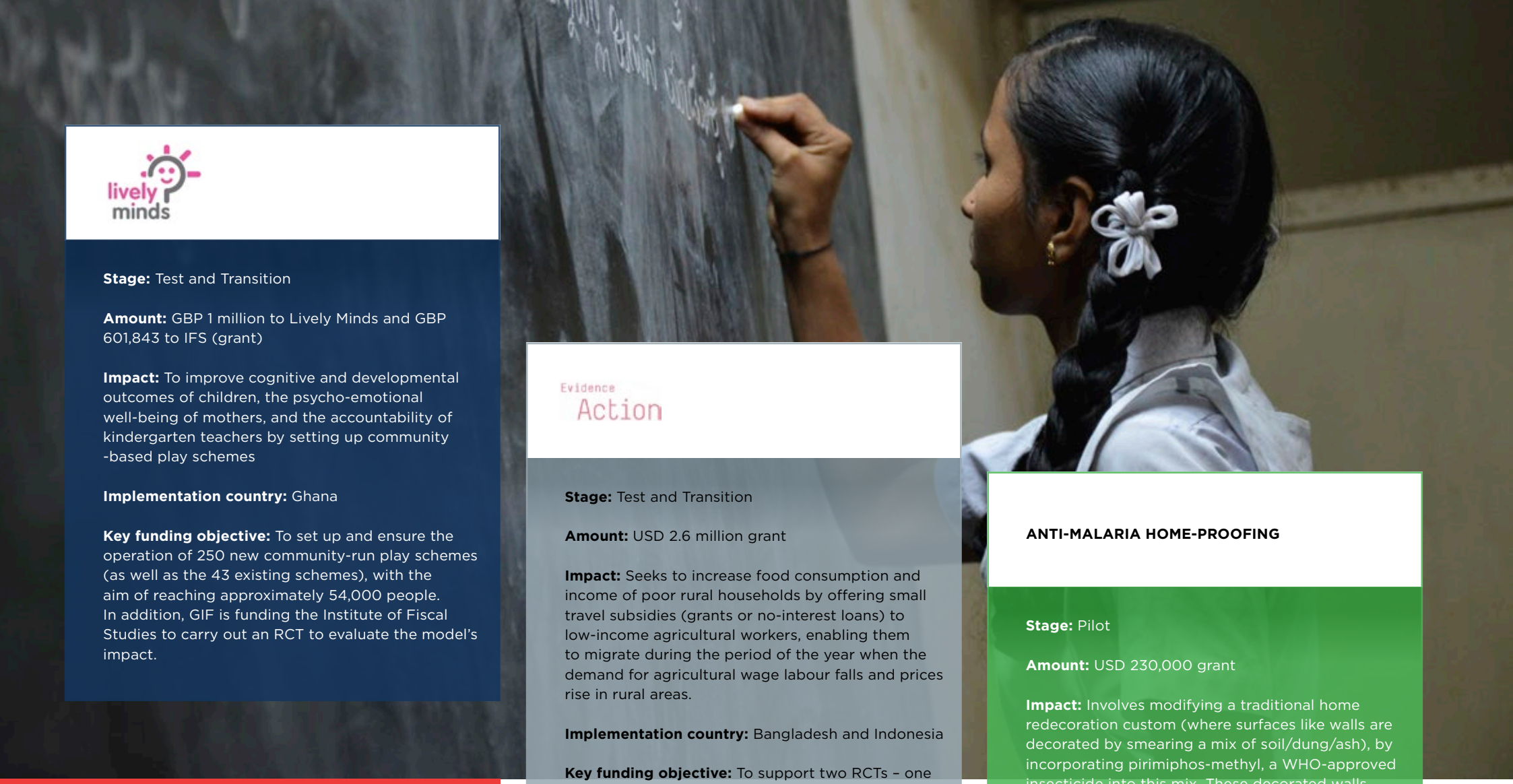
Stage: Test and Transition

Amount: USD 1.3 million grant

Impact: Aims to test whether distributing free iron-fortified rice through the existing Public Distribution System can cost-effectively reduce anaemia, which affects 60% of children between 6 months and 5 years of age, and 56% of pregnant women in Tamil Nadu.

Implementation country: Tamil Nadu, India

Key funding objective: To support a randomised controlled trial to test whether the distribution of fortified rice through the PDS is a cost-effective way to treat anaemia at scale.work better for the poor.



Stage: Test and Transition

Amount: GBP 1 million to Lively Minds and GBP 601,843 to IFS (grant)

Impact: To improve cognitive and developmental outcomes of children, the psycho-emotional well-being of mothers, and the accountability of kindergarten teachers by setting up community -based play schemes

Implementation country: Ghana

Key funding objective: To set up and ensure the operation of 250 new community-run play schemes (as well as the 43 existing schemes), with the aim of reaching approximately 54,000 people. In addition, GIF is funding the Institute of Fiscal Studies to carry out an RCT to evaluate the model's impact.

Evidence Action

Stage: Test and Transition

Amount: USD 2.6 million grant

Impact: Seeks to increase food consumption and income of poor rural households by offering small travel subsidies (grants or no-interest loans) to low-income agricultural workers, enabling them to migrate during the period of the year when the demand for agricultural wage labour falls and prices rise in rural areas.

Implementation country: Bangladesh and Indonesia

Key funding objective: To support two RCTs – one for a scale roll-out of the program in Bangladesh and another a pilot RCT in Indonesia.methods.

ANTI-MALARIA HOME-PROOFING

Stage: Pilot

Amount: USD 230,000 grant

Impact: Involves modifying a traditional home redecoration custom (where surfaces like walls are decorated by smearing a mix of soil/dung/ash), by incorporating pirimiphos-methyl, a WHO-approved insecticide into this mix. These decorated walls then kill mosquitoes upon contact.

Implementation country: Uganda

Key funding objective: To conduct a 3-year field trial of the innovation to generate acceptability, safety, and efficacy data.

EM3 Agri Services

Stage: Test and Transition

Amount: USD 7.4m USD equity investment

Impact: India's first pay-per-use farm mechanisation services company providing affordable farm services to smallholder farmers

Implementation country: India

Key funding objective: To support EM3 to tackle the challenges that Indian smallholder farmers face when trying to access mechanised farming equipment. Through an innovative business model which formalises and improves upon existing informal service channels, EM3 is making farming mechanisation affordable for the first time to millions of rural poor Indian farmers.

REMITTANCES LABELLING

Stage: Test and Transition

Amount: $1.7m grant

Impact: Testing behavioural-based 'labelling' of financial products to increase the amount and impact of remittances sent by migrants to households in their home countries.

Implementation country: Philippines

Key funding objective: To support a team which comprises of a partnership between academics with migration/remittance expertise, and financial institutions such as the Bank of the Philippine Islands (BPI), to conduct randomized impact evaluations of the impacts of a real-world versions of the remittance labelling product, relating to both the changes in remittance behaviour of the migrants, and changes in spending patterns and life outcomes of the recipient households.

educational initiatives

Stage: Test and Transition

Amount: USD 2.3 million grant

Impact: Roll out of Educational Initiatives' adaptive learning software, Mindspark, within 80 government schools and integrate the platform into regular classroom teaching by government school teachers, and to develop a set of experimental research studies on effective teaching methods from the data generated during the implementation.

Implementation country: India

Key funding objective: To support the classroom integration of Mindspark in the government system, and development of a Learning Lab, which would produce knowledge on learning deficits and effective pedagogy in low-income settings.out cash transfer implementation across a number of clients with an ambition to reach hundreds of thousands of people.

TALENT BEYOND BOUNDARIES

Stage: Pilot

Amount: USD 230,000 grant

Impact: The first and only organisation that is working with the private sector to establish this pathway by performing a labour market matching role among refugees. TBB's goal is to place refugees in jobs in stable countries around the world where they can regain their self-reliance through private sector employment.

Implementation country: Syria (Syrians in Jordan and Lebanon), Morocco, United Arab Emirates (UAE)

Key funding objective: To expand Talent Beyond Boundaries' pilot to include job placements in Morocco and provide crucial evidence for proving and scaling up the refugee labour market matching model to cover refugees and employers in different countries.

ideas42

Stage: Test and Transition

Amount: USD $2.2m grant

Impact: ideas42 to design, implement, and test 'nudges' to encourage recipients of cash transfers in Ghana, Kenya, and Tanzania to invest more in the early childhood development of their children. The grant will also be used to support country governments and the World Bank to look at ways of integrating nudges into government programmes.

Implementation country: Ghana, Kenya, and Tanzania

Key funding objective: The ideas42 team will analyse each country's cash transfer programme to define problems and design/test/scale solutions that are likely to include framing or labelling, timing, goal-setting and plan-making. The impact of these nudges will be rigorously evaluated and findings will be disseminated to the World Bank, country governments and other stakeholders as well as add to the evidence base for the effectiveness of nudges in CT programs.

Stanford University

Stage: Pilot

Amount: $460,000 grant

Impact: Grant to Stanford University researchers to refine and test methods to measure crop yields from space at the level of an African family farm. If proven and deployed at scale, the innovation could provide inexpensive, comprehensive, accurate and timely information to national extension agencies and to companies and NGOs that serve smallholder farms. This information, previously unavailable, could unlock ways to boost farm productivity.

Implementation country: Burkina Faso, Ghana, Kenya, Mali, Mozambique, Ghana, Rwanda, Tanzania

Key funding objective: GIF is helping the researchers develop and refine algorithms that have shown promise in field level yield measurement from space. To improve the accuracy and credibility of the estimates, the researchers will use high resolution, high frequency imagery from Planet. This allows observation of features as small as 3 meters, on a daily basis.

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GLOBAL INNOVATION FUND