

UNICEF Venture Fund

Annual Report 2023



unicef 
for every child

office of
innovation

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Part I

Introduction

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Executive Summary

In a post-pandemic world with continuously broadening inequities, humanitarian emergencies and widening geopolitical conflicts, attaining the 2030 Sustainable Development Goals requires a radical transformation in the pace of progress. While we are seeing an increasingly fast evolution of AI, machine learning, blockchain and other frontier technologies, there's an increasing gap between those who benefit from these technologies and those who are left further behind.

In this context, the role of UNICEF's Venture Fund - to invest in disruptive, early-stage Open Source solutions in underserved markets to validate, test and shape technology which can be scaled to radically improve the lives of children – is more crucial than ever.

Over the past year, the Fund has undergone significant transformations, reshaping its core foundation to effectively achieve the impactful outcomes we strive for. In addition, our investment and due diligence processes were thoroughly audited and demonstrate the robustness and suitability of the systems implemented by the Fund. This rigorous audit revealed no gaps, reaffirming our commitment to maintaining high standards and ensuring the integrity of our operations.

A notable change has been the institutionalization of the UNICEF CryptoFund within the organization, unlocking new and more agile avenues for catalyzing financing to support UNICEF's innovation and programmatic work.

The UNICEF Ventures team has now fully moved to the **Office of Innovation Headquarters in Stockholm**, Sweden.

UNICEF Ventures has strengthened the expertise in the team to better serve the organization, focusing on its core programming – frontier technologies and Open Source Digital Public Goods (DPGs).

There has been strengthened alignment between the Venture Fund, the scale portfolios and Hubs to leverage the full potential of UNICEF’s Office of Innovation. In 2022, the Fund worked alongside the climate change-focused portfolio and WASH Hub to launch a joint call on climate change focused solutions.

In an effort to demonstrate and measure the impact of our work in the world, the Venture Fund underwent a process of redefining and reinforcing its investment thesis, impact framework and results measurement methodologies. This report discusses the progress towards our refined impact goals across five key dimensions—

1. Market Shaping

Catalyze investments to de-risk technologies, foster diverse businesses (founders, talent, products), and drive funding towards under-represented markets.

2. Impactful Business

Build the capacity and sustainability of Open Source businesses which have the potential to deliver solutions in impactful sectors to improve the lives of children.

3. Openly Accessible Solutions

Facilitate a local innovation system that promotes Open Source IP and scalable Digital Public Goods which have the potential for adoption to solve global challenges.

4. Scalable Solutions

Validate and pilot technology solutions which can be scaled to improve the lives of children in UNICEF Country Offices and programme countries.

5. Evidence Generation

Generate evidence and learning to demonstrate the relevance and efficacy of Open Source technology solutions and Digital Public Goods for improving the lives of children and building the knowledge of disruptive technologies and their potential for UNICEF.

To date

82 Startup
investments

61 Country Office
investments

Market Shaping

- In 2022-23, the Fund launched 2 new calls to new thematic areas for the Fund: **digital inclusion and connectivity, and climate change**. The Fund has also embarked on new geographic frontiers by **expanding its investments in Fragile and Conflict-Affected States**. By investing in a cohort of UNICEF Country Offices based in these regions to pilot transformative solutions, while fostering local innovation ecosystems, the Fund aims to fill a funding gap in markets that heavily rely on humanitarian aid and face limited access to financing for innovative, longer-term initiatives.
- The new investments bring the Venture Fund's reach to 82 startup investments and 61 Country Office investments, **spanning 79 countries** by Q2, 2023.
- **16 investees received all or part of their investment in cryptocurrency**, demonstrating the Fund's ability to catalyze new sources of funding towards under-represented markets, through an institutionalized CryptoFund.

To date

41M Number of
Beneficiaries

64% Revenue generating
early-stage startups

Impactful Business

- To date, the Fund investees have reached a total of 41.5M beneficiaries in 6 sectors, **a 31% increase from last year's 31.7M beneficiaries**.
- Three startup cohorts graduated in 2022-23, achieving results across child online safety, learning, health, and financial inclusion, and contributed to Open Source intellectual property across blockchain, AI and data science.
- Strengthened financial sustainability of our investees reflects our efforts to build solid Open Source businesses that can sustain their impact: currently 64% of our portfolio companies are generating revenue, and the investees (startups and country offices combined) have raised USD \$36.7M in follow-on funding after the Venture Fund Seed Funding – **a 32% increase from last year**.
- Leveraged new funding for Digital Public Goods by piloting innovative fund-raising models such as quadratic voting and raised 67ETH + USD \$15,000.

To date

18 Certified Digital Public Good solutions

Openly Accessible Solutions

- The Fund continues to support the development of quality Open Source Digital Public Goods, resulting in 18 solutions that have been awarded DPG status.
- This status confirms the technical quality of the solutions and provides exposure to a global audience, potential deployments and funding opportunities.

To date

15 Solutions deployed by UNICEF Country or Regional Office

Scalable Solutions

- In 2022-23, the Fund continued fostering cohorts of growth funded startups to accelerate and position them to scale.
- The Fund also built co-investments across portfolio startups and UNICEF's Country Programmes to validate solutions and to generate evidence of the potential impact.
- To date, 16 startup solutions have had deployments or collaborations with UNICEF Country or Regional Offices, with 5 new collaborations happening this year (Cloudline, Rumsan, Treejer, NubianVR and Xcapit).
- A total of 25 solutions have scaled to at least 1 new country, 5 solutions scaled to more than 5 countries and 8 startups have scaled to 11 or more countries.

29 Solutions scaled outside their country of origin

Evidence Generation

- Our cohort model, investing in clusters of Open Source solutions, generates insights into the potential of emerging technology areas to accelerate results for children. The Fund has strengthened its approach in generating and collecting evidence of results. This report highlights our recent insights and learnings on blockchain, child online safety solutions, and AI.
- In the past year, **a rigorous workshop series** was held to strengthen startup capacity in developing evidence of impact; **an institutional evaluation** of a startup pilot with country office is underway; and **external events** were leveraged to share startups' insights.

01 Ongoing country office pilot evaluation

Our Strategic Partners:



Ministry Of Foreign
Affairs Of **Denmark**



Ministry Of Foreign
Affairs Of **Finland**



Huobi Charity



Ethereum
Foundation



Takeda Pharmaceutical
Company Limited

Expression of Thanks

As we reflect upon the challenges that the past year has presented, we are humbled by the support and commitment of our partners to our cause.

In the face of geopolitical pressures, macroeconomic uncertainty, and banking sector turmoil, there is a sustained slowdown in investment activity, especially Venture Capital funding for emerging markets. Despite this, the UNICEF Venture Fund remains dedicated to challenge and utilize frontier technologies to deliver for children and promote equity for all through creating Open Source solutions that are available and accessible across the world.

The Venture Fund is grateful for the long-standing confidence and commitment shown by our partners. Your support enables the Fund and the Office of Innovation to lead the public sector innovation ecosystem and continue to cultivate a community of problem solvers. Together, we strive to identify cutting-edge innovations that address the needs of children.

The Fund would like to take this opportunity to express its sincere appreciation especially to our partners, the Governments of Denmark, Estonia and Finland, Animoca Brands, Chainlink, Digital Ocean, Ethereum Classic Labs, the Ethereum Foundation, Huobi Charity, Kirill Tatarinov, and Takeda Pharmaceutical Company Ltd. for their generous contributions.

Part II

Foundations Fit for Impact

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UNICEF Venture Fund

Impact Framework

In 2022 and 2023, the Venture Fund strengthened further the Fund's investment thesis, impact and results frameworks, as well as the overall data and monitoring processes.

This enables the Fund to better inform investment decisions and to more effectively communicate the value of the Fund's investments within UNICEF's overarching mandate of delivering for children.

In the context of the continued building of new scaling structures within the rest of the Office of Innovation, **the updated impact framework will facilitate clearer matchmaking workstreams between the Venture Fund and the rest of the Office of Innovation** and the organization, to more effectively scale up solutions graduating from the Fund.

In the updated Impact Framework, the Venture Fund defines its contribution in five key outcome areas, outlined in the next two pages.

This Annual report 2022-23 is structured around the impact framework, illustrating key results towards each of the outcomes.

Please refer to the [annex](#) for detailed framework and indicators.



Definition of Outcome Areas

Outcomes

**Market Shaping**

Catalyze investments to de-risk technologies, foster diverse businesses (founders, talent, products) and drive funding towards under-represented markets

- Increased Growth + Channeling of investments to underserved founders and markets

**Impactful Business**

Build the capacity and sustainability of Open Source businesses which have the potential to deliver solutions in impactful sectors that can improve the lives of children

- Improved sustainability of businesses
- Improved uptake and reach of solutions

**Openly Accessible Solutions**

Promote and facilitate a local innovation system that promotes Open Source IP and scalable digital public goods which have the potential for adoption to solve global challenges

- Increased availability and accessibility of Open Source technology
- Enhanced ecosystem of Open Source actors

**Scalable Solutions**

Validate and pilot technology solutions which can be scaled to improve the lives of children in UNICEF country offices and programme countries

- Solutions validated and adopted through Country Offices, hubs, and portfolios
- Enhanced geographic reach of solutions

**Evidence Generation**

Generate evidence and learning to demonstrate the relevance and efficacy of Open Source tech solutions and digital public goods for improving the lives of children and building the knowledge of disruptive technologies and their potential for UNICEF

- A robust evidence base that demonstrates the effectiveness of solutions to improve the lives of children

UNICEF Thematic Priorities

Health and
Nutrition

Education and
Learning

Child
Protection

Climate and
Environment

Social Policy and
Protection

Humanitarian

Disability

Gender

Audit Results

Audit concludes that the Venture Fund processes **are adequate and functioning well**. It did not point to any improvement areas for the Fund.

The Office of Internal Audit and Investigations (OIAI) conducted an audit of the UNICEF Venture Fund and CryptoFund, covering investments from July 2020 to July 2022. The overarching objective of the audit was to assess the adequacy and effectiveness of the controls over the funds received, selection of projects to receive funding, and implementation of projects.

The audit was conducted in accordance with the International Standards for the Professional Practice of Internal Auditing. Based on the audit work performed, OIAI concluded that the assessed governance, risk management and control processes were **Satisfactory**.



← Scale of assessed governance, risk management or control processes →

Satisfactory

Assessed governance, risk management or control processes are adequate and functioning well.

Partially Satisfactory — Improvement Needed

Generally adequate and functioning but needs improvement. The weaknesses or deficiencies identified are unlikely to have a materially negative impact on the performance of the entity, area, activity or process.

Partially Satisfactory — Major Improvement Needed

The weaknesses or deficiencies identified could have a materially negative impact on the performance of the audited entity, area, activity or process.

Unsatisfactory

Not adequately established or not functioning well. The weaknesses or deficiencies identified could have a severely negative impact on the performance of the audited entity, area, activity or process.

**Part III - Outcome 1**

Market Shaping

▪ Indicators	14
▪ Cultivating a Market of Solutions for Children	
○ Fostering frontier technologies to combat Climate Change	16
○ Growing a Pipeline of Diverse Founders and Talent	17
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▪ Driving new funding streams towards innovation for children	23





Part III - Outcome 1

Market Shaping

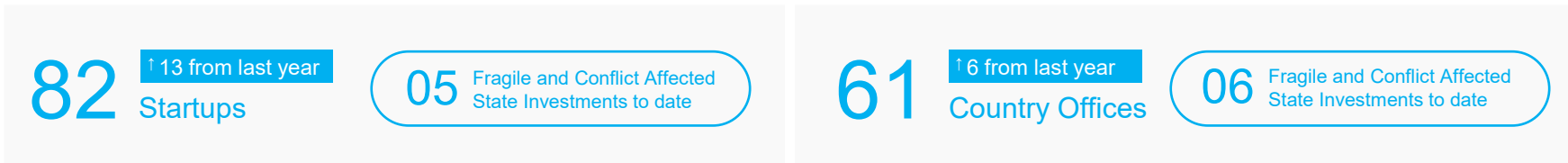
Total value of the Venture Fund

\$35.5M + 2527^{ETH} + 8^{BTC}

Catalyze investments to de-risk technologies, foster diverse businesses and drive funding towards under-represented markets. In 2022-23, the Fund has catalyzed investments into new thematic areas, including: climate change, digital inclusion and connectivity. The Fund also concentrated efforts towards investing in underserved geographies, through the focus on fragile and conflict-affected country contexts. In addition, the Fund has solidified and tested new funding modalities through the institutionalization of the CryptoFund, and the piloting of quadratic funding.

To date, the Fund has grown its reach to:

● Outcome Indicators ● Thematic Indicators - % invested per UNICEF thematic priority





Cultivating a Market of Solutions for Children

I. Fostering frontier technologies and startups to combat Climate Change

In November 2022, UNICEF Venture Fund announced a new call for applications for Climate Startups seeking innovative solutions that use frontier technologies to combat the alarming risks faced by nearly one billion children worldwide due to climate change.

As the adverse effects intensify, investing in climate adaptation and resilience measures, with a strong focus on improving access to essential services for children and promoting equity, becomes essential to safeguarding children's wellbeing and minimizing the damage caused by climate change.

The response to the UNICEF Venture Fund's call for applications was exceptional, **with 409 expressions of interest received from 72 UNICEF program countries. Africa is the continent with the most applications, leading with 56% of the total of applications, followed by Asia, with 23%**. The applications showcased the wealth of largely untapped creativity towards climate goals in developing economies, and utilized a range of frontier technologies, from AI and data science, to blockchain, XR, and drones.

39%

Engaging communities in climate action

24% Climate Change and Disaster Risk Mitigation

20% Encourage sustainable practices, reduce carbon footprints, and create incentives for organizations and individuals to participate in carbon offset programs

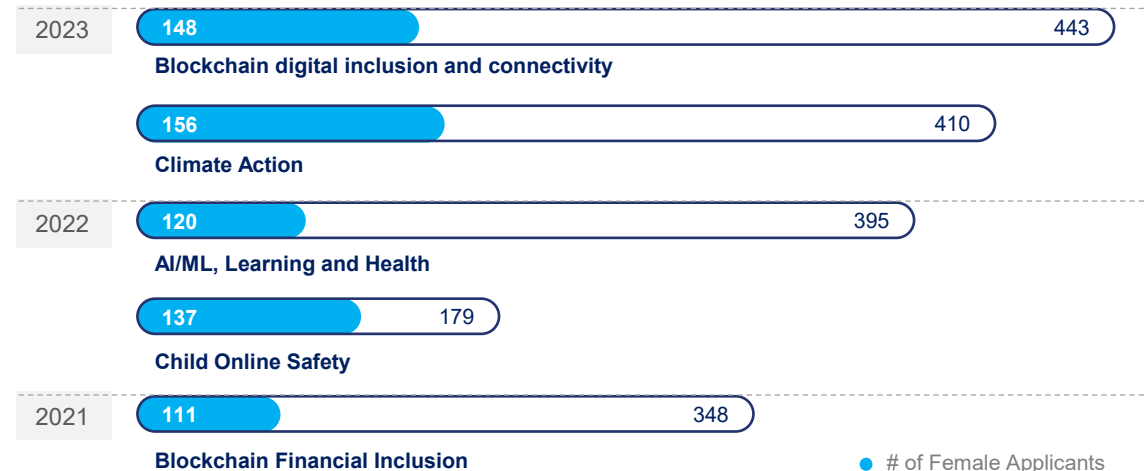
16% Climate Analytics or Forecasting, harnessing advanced data science and analytics to predict climate patterns, enabling better preparedness and decision-making to mitigate climate risks



Among the companies that responded to the latest climate call, **38% were either led or co-led by women.**

II. Growing a Pipeline of Diverse Founders and Talent

Efforts to build a gender-balanced portfolio through the Smart Investing Initiative has the Fund at 43% female-led investments (target is 50%), and there has been a surge in female-led companies applying to the Fund (up to 40% of applications). However, there is still scope for further improvement and increased representation. **Diversity, equity, and inclusion (DEI) expertise is being brought in to help the Fund further expand on its Smart Investing initiative by tackling how to bring in more founders who are often underrepresented, underserved, and underestimated;** how to create enabling environments for intersectional identities; and how to create more equitable pathways for founders and problem solvers at a global level.



III. New frontiers: Investing in blockchain for digital inclusion and connectivity

In February 2022, the Fund launched our third call for blockchain based solutions. Building on the learnings of our previous blockchain cohorts, the call aimed to identify solutions that improve digital inclusion using blockchain.

The call received over 350 applications from 51 countries, mostly from startups based in Africa (46%) and South Asia (18%). Nigeria, Kenya, and India produced the most applications. Four blockchain companies were selected for the digital inclusion and connectivity cohort. They were onboarded in January 2023 and are now at the midpoint in their journey with the Venture Fund.

Three of the companies are from Sub-Saharan Africa, reflecting the share of applications from this region. This cohort focuses on solutions that improve accountability of service delivery and policies, grow and improve funding flows, and improve equity in access to connectivity and the digital world.



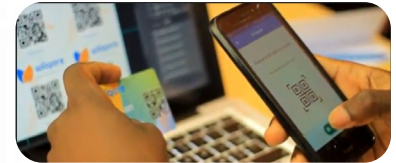
Convexity Technologies (Nigeria) is using blockchain to develop a user-friendly cash transfer solution to connect all stakeholders, enhancing transparency in aid administration.



Investtools (Brazil) is developing a blockchain-based marketplace to incentivize the delivery of resources, such as connectivity to hard-to-reach communities.



Xmesh (Nigeria) is an internet connectivity solution tokenizing the connectivity market by reselling satellite internet to local communities through SMEs for last-mile connectivity.



WiiQare (Democratic Republic of Congo) is creating a savings platform specifically directed towards remittances for healthcare.



Amidst armed conflict in Sudan, flaring violence in Kosovo, and climate vulnerability in numerous countries, global humanitarian crises require out-of-the-box solutions to address complex problems.

IV. Venturing into Fragile and Conflict Zones

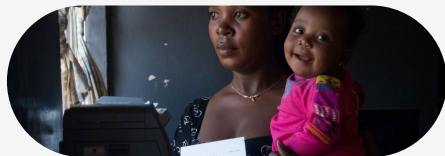
Long-term approaches that foster job creation and private sector development are crucial for lifting fragile and conflict zones from poverty and fragility. However, Fragile Countries and Conflict-Affected States often receive short-term development finance that only provides temporary relief, failing to tackle underlying issues. Additionally, traditional investors are deterred by the higher risks and costs associated with such contexts, despite the potential for significant social and economic benefits.

To bridge this gap and shape volatile markets, the Fund has intentionally financed intrapreneurial ventures from Fragile Countries and Conflict-Affected States in 2023. Its strategy complements humanitarian aid by bolstering innovative financing through UNICEF Country Offices. These collaborations aim to incubate context-specific innovative approaches, activate local innovation ecosystems, and empower youth to become skilled problem-solvers and social entrepreneurs.

A snapshot of the UNICEF's Country Office investments in late 2022 and early 2023 include:

- [Mapping primary health care innovation in Sudan](#)
- [Incubating equitable Digital Public Goods with vulnerable youth in Lebanon](#)
- [Upskilling young Ethiopians on drones and data science for precision agriculture](#)
- [Enhancing Global Humanitarian Response through UNICEF's Rapid Drone Response Toolkit](#)
- [Harnessing AI to Detect Anomalies in Humanitarian Cash Transfers in Yemen](#)

Mapping primary health care innovation in Sudan



Ongoing armed conflict and humanitarian emergencies has put Sudan's health sector on the verge of collapse: acute food insecurity could impact up to 19 million people in the next 3-6 months. Sudan has insufficient primary healthcare (PHC) to address the needs of children and their communities. Digital health and a robust innovation ecosystem can play a massive role in effectively and efficiently leapfrogging PHC in Sudan.

As an initial exploratory phase to a longer-term initiative, the PHC Sudan ecosystem mapping shall help lay strong foundations for UNICEF Sudan to deliver at-scale lifesaving and life-sustaining T4D PHC solutions in fragile and conflict settings.

Incubating equitable Digital Public Goods with vulnerable youth in Lebanon



Lebanese youth are disadvantaged in the digital economy due to ill-equipped education systems, decreasing job opportunities, and inadequate 21st-century skills. Building on the success of UNICEF Lebanon's Generation of Innovation Leaders programme empowering Lebanese youth, UNICEF Lebanon, with the Venture Fund, shall enhance the 13 innovation labs by embedding a module on Digital Public Goods (DPG).

The DPG incubator shall empower underrepresented youth to build Open Source technologies that are more discoverable, sustainable, and ethically responsible. By developing a DPG toolkit that complements and builds on GIL's existing curriculum, GIL aims to have more impact-driven tech youth entrepreneurs in Lebanon.

Upskilling young Ethiopians on drones and data science for precision agriculture



UNICEF Ethiopia is launching the African Drone and Data Academy (ADDA), which aims to equip young Ethiopians with drone-related STEM and data science skills to address critical risks posed by climate change, weak healthcare systems, and chronic disease burden in the country and Africa. ADDA Ethiopia will facilitate employment and entrepreneurial opportunities among youth by upskilling them to construct, pilot and leverage drones and data, with particular focus on precision agricultural use cases.

Enhancing Global Humanitarian Response through UNICEF's Rapid Drone Response Toolkit



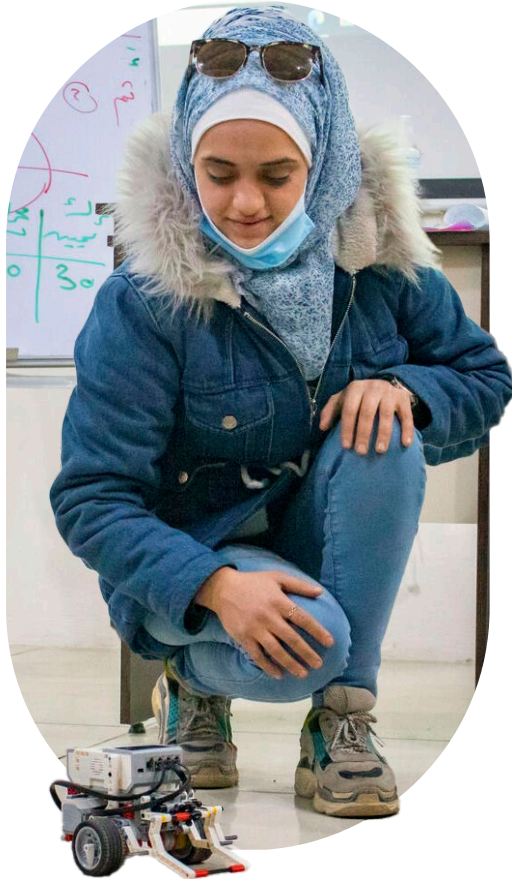
UNICEF Malawi, with the Fund's investment, is developing a Rapid Drone Response Blueprint and Deployment Toolkit as a Digital Public Good. This initiative addresses the need for early, accurate, and interoperable information in highly vulnerable countries affected by extreme weather events. By streamlining the collection, analysis, and dissemination of aerial imagery, the toolkit will improve the coordination of humanitarian operations during emergencies. It includes operating procedures, standard scenarios, and hardware/software recommendations to integrate drones into inter-agency assessment groups. By testing and documenting the framework in Malawi's emergency response and information management, valuable insights can inform global SoPs for UNICEF's rapid response efforts, serving as a model for other countries facing similar emergencies.

Harnessing AI to detect anomalies in humanitarian cash transfers in Yemen



UNICEF supports emergency cash transfers **benefiting 1.5 million of Yemen's poorest families, estimated to reach 9 million people**. This vital lifeline helps families make ends meet. The Yemen Country Office aims to enhance its cash transfer Management Information System (MIS) by incorporating AI/machine learning-based anomaly detection to test the feasibility and effectiveness of improving its cash transfer program, which has disbursed 980 million USD and reached about one-third of Yemen's population since 2017. Strengthening this mechanism is crucial for accurate, efficient cash disbursement, expected to yield cost savings by identifying anomalies and preventing the loss of UNICEF funds.

Most of these projects kicked off in early 2023, and the Fund is excited to report on their progress in the subsequent annual report.



Driving new funding streams towards innovation for children

The Venture Fund made headway in solidifying and testing blockchain and cryptocurrency based financial mechanisms to channel and catalyze new funding streams to underserved markets. Highlights from 2022-23 included the institutionalization of the UNICEF CryptoFund, following a successful pilot phase, as well as a quadratic funding pilot with 10 investees of the Venture Fund.

I. Institutionalizing the CryptoFund

The UNICEF CryptoFund was launched as a prototype Fund from October 2019 – December 2022, making UNICEF the first organization within the UN to accept, hold and disburse cryptocurrency for programmatic purposes.

II. Quadratic Funding

The Venture Fund continues to explore innovative ways to direct funding towards proven solutions. Quadratic Funding is the mathematically optimal approach that leverages blockchain technology to allocate funding in a democratic community.



I. Institutionalizing the CryptoFund

In December 2022, the UNICEF CryptoFund was approved as an institutionalised funding vehicle for the organization. The results and success of the prototype period (2019-2022) have delivered on the objectives outlined for the Fund. The next phase enables UNICEF to expand the use of cryptocurrencies and leverage the benefits of transparency and efficiency for children's programmes globally. The donors of the Fund have supported a pilot that has been instrumental in testing and proving the value of operating in cryptocurrency and has prepared the organization for the scale-up of this approach.

The UNICEF CryptoFund will now have the same cycle as that of the UNICEF Venture Fund. During the pilot period, UNICEF spent more value than what donors expected us to disburse (based on the value at the time of receipt, UNICEF raised \$2.1M USD in cryptocurrency and the amount spent is over \$3.7M USD based on value at disbursement).

The CryptoFund has differentiated UNICEF in the fundraising landscape and helped raise funds for regular resources and direct donations. Vendors are interested in cryptocurrency as a form of payment – this includes startups, but also traditional vendors such as consulting firms or other service providers.

While the volatility of cryptocurrencies continues to present a practical challenge, there remains a demand for the use of cryptocurrency from all stakeholders – donors interested in supporting innovative projects, companies willing to accept crypto as payment, and interest from UNICEF colleagues to explore prototypes for leveraging benefits of using cryptocurrency in various contexts.

We are proud to share that the UNICEF **CryptoFund has been institutionalized** and has set the stage for the organization to leverage the potential of cryptocurrencies.

Total Value of CryptoFund:

2479^{ETH} + 4.8^{BTC}

100% Transparency of transfer of funds

< 1% Spent on transaction Fees

41 Projects Funded by the CryptoFund



II. Quadratic Funding

Quadratic Funding is the mathematically optimal approach that leverages blockchain technology to allocate funding in a democratic community. This funding method aligns with the needs of the community, as determined by the community itself. It functions similarly to a crowdfunding campaign, using an algorithm to match individual donor contributions with larger donations from a pool.

For the pilot, the UNICEF CryptoFund contributed 50 ETH to the pool. After a two-week campaign period, 15,507 unique donors contributed 67.52 ETH and \$14,788 in DAI.

In November 2022 we partnered with [Gitcoin](#) to conduct a Quadratic Funding (QF) pilot with 10 investees of the UNICEF Venture Fund who have also been recognized by the Digital Public Goods Alliance as Digital Public Goods (DPGs). Traditional funding models often prioritize well-established donors who contribute funds towards a specific initiative or organization. The Venture Fund was eager to identify a novel way to allocate these funds in a democratic way, as determined by community members. Another opportunity was to raise visibility around the work of the digital public goods and to encourage engagement from a wider range of community members.

The pilot yielded more than just quantitative results – it was a significant milestone in demonstrating the real-world impact of blockchain technology. The pilot also increased awareness of the DPGs among a wider range of community members, who took a keen interest in learning about the different DPGs to make informed decisions about where to allocate their donations. The transparency afforded by the blockchain technology enabled clear visibility and transparency of the fund allocation. By empowering the entire community to influence decision-making, rather than just a select few, the pilot represented a pioneering effort in promoting equitable distribution of resources.

In 2023, the Fund seeks to launch additional rounds of quadratic funding with the objective of

- i. **Driving new and additional financing for Digital Public Goods from the Fund portfolio**
- ii. **Building and strengthening community engagement for solutions delivering positive impacts for children**



Part III - Outcome 2

Impactful Business

- Indicators ----- 27
- Startup cohorts delivering impact
 - Child Online Safety Cohort ----- 28
 - AI and Data Science Cohort ----- 34
 - Financial Inclusion Cohort ----- 36





Part III - Outcome 2

Impactful Business

Build the capacity and sustainability of Open Source businesses which have the potential to deliver solutions in impactful sectors that can improve the lives of children. The second outcome area of the Fund focuses on the capacity and sustainability of Venture Fund investees through key metrics across their business and reach. In 2022-23, several cohorts and projects made headway in developing Open Source solutions, reaching users and beneficiaries, and building financial sustainability. **Below is a broad view of startup performance (both of active investees and alumni companies) to date:**

● Outcome Indicators ● Thematic Indicators - # of Beneficiaries

\$25.3M ↑ 49% from last year
Follow-on funding raised by **50 startups***

\$11.3M ↑ 13% from last year
Follow-on funding raised by **42 Country Offices**

64% Raised by female led startups



64% ↑ 16% from last year
Companies are revenue generating

38% ↑ 6% from last year
Companies are profit generating

*excluding the newly selected climate cohort

41.5M ↑ 31% from last year
Beneficiaries

10.8M Children Reached

14M

Education and Learning

6.8M

Poverty Reduction and Social Protection

628K Health and Nutrition

14.4M

Multisectoral solutions

562K WASH, Climate and Environment

2M

Child Protection



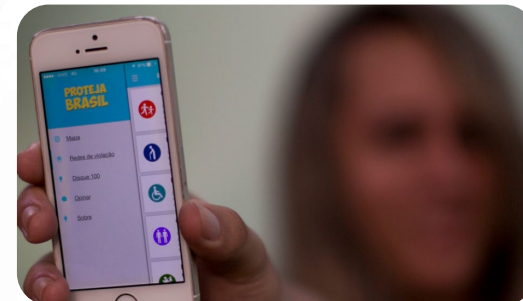
Child Online Safety Cohort

Originally onboarded in February 2022 in partnership with the Global Partnership to End Violence Against Children, the Fund is proud to see **the two female-founded companies that developed Open Source, AI-powered solutions** graduate from the Venture Fund by June 2023.

The cohort also yielded important learnings from investing in the space of child online safety tools, which will be discussed in detail in the section “Evidence Generation.”



Tilli, Sri Lanka is an AI-powered play-based, Social-Emotional Learning (SEL) tool designed for 5-10 year olds. They create fun learning experiences for both homes and classrooms



Talk2U, Brazil is a tech-based social startup that believes that strengthening emotional intelligence is the key to outsmart life challenges and enhance mental wellbeing in youth



Tilli

Tilli (Sri Lanka) teaches 5-10 year-olds the skills needed to stay safe and healthy.

The tool includes 3 learning modules on online safety skills, focused on helping kids develop clearer mental models around trust and boundaries, recognize and label their emotions and practice lifelong, coping strategies to manage difficult emotions, and digital safety.

- 80% completion rate.
- 90% of learners successfully applying what they learn through Tilli towards everyday problem-solving.
- Tilli has reached 5000+ learners within a span of 2 years.

Partnerships + Recognition

- Launched a partnership with Save the Children to deliver social-emotional learning kits to 3,000 kids in Sri Lanka.
- Won the Global Youth 4 South Entrepreneurship Competition in Bangkok organized by the United Nations Office for South-South Cooperation, ITU, and UNESCAP.
- Selected as one of the Elite 200 EdTech Startups and named one of the world's most innovative 200 startups by GSV Ventures.
- Won the Launch Competition and Impact Award at the SXSW EDU Conference and Festival.





Talk2U

Talk2U (Brazil) completed the development of their open content Hate Speech journey in Portuguese.

- They designed an outcome study during their investment period to prove the efficacy of their solution in improving the mental wellbeing of young people who engaged with their chat intervention.
- The pilot research had over 400 participants in Brazil and 85% of them found the experience to be valuable to learn about hate speech and deal with its impact.
- 40% increase in the adoption of more effective coping techniques.
- Currently co-designing an RCT which will provide their external validation regarding the effectiveness of their solution.

Partnerships + Recognition

- Closed collaboration partnerships with Redes Cordiais and Viração Educomunicação and summoned a youth committee including 3 Ashoka Young Changemakers.
- Launched “KEFI,” a therapeutic chat conversation about HIV for people living with HIV in collaboration with UNICEF Brazil and UNAIDS.
- Formalized partnership with UNICEF Health HQ to develop a bundle of 6 interventions in 3 languages focused on Mental Health for people on the move.
- Launched “Cadé e Kaue,” - a therapeutic chat conversation to promote peer support and collective action for mental health, co-created with the University of Oxford and the University of Brasilia (Efficacy Trial estimated for 2023-24).





Insights into Child Online Safety

The Child Online Safety cohort, graduating in June 2023, brought important insights on investing in the child online safety space

On evidence generation

- **The ecosystem in the child online safety space has expressed a requirement for rigorous evidence of impact** to be provided in line with these solutions and there is proven value for the companies to invest in evidence generation.
- **Having a well-defined Theory of Change is hugely beneficial for the companies** and enables not only internal alignment for the objective of the product, but clearer storytelling for external audiences and strategic business opportunities.

On business models, talent and partners

- **Monetizing child-focused products can be challenging** and finding investors that are willing to invest in the sector requires perseverance, as the types of business models (i.e. B2G) might be less desirable to some. It is a necessity for the companies to have patience and to find the right fit with investors, with aligned goals and expectations. For example, when speaking with traditional ed-tech investors there may be unrealistic expectations for a higher traction than these companies are generating.



- **One of the main struggles that early-stage startups encounter is attracting and retaining talent.** Local conditions, such as ongoing crises in the country, can aggravate this. We've seen the need for companies to invest in bringing onboard relevant talent, pivot fast when facing staffing issues, and focus on core projects that bring the highest value add to the company when going through these transitional periods.
- **First-hand introductions often result in the highest potential for new partnerships.** We are grateful to the End Violence Against Children team for all the relevant connections they have made for this cohort to date.

Nuances of being Open Source

- Open Source games have a different landscape to navigate than that of traditional Open Source software. The Open Source movement in the gaming community is still at an earlier stage than in other verticals. That comes with implications, such as cultural differences between open and proprietary game development, and a smaller talent pool available to work with Open Source game development tools.
- This cohort included companies specifically focused on Open Source content and exposed the need for The Fund to strengthen our programme in the particular area.
- **Cohort/Cross-cohort collaborations continue to generate promising results.** Talk2U's partnership with Venture Fund alumni company Weni, which involves Weni providing Open Source Technology specifically around platform flows and a data dashboard, has further shown the value and benefits of these collaborations and existing Open Source technologies.



Bookbot

Bookbot (Indonesia) is an innovative reading program for early primary school readers.

- It has shown to improve reading fluency by 2X and makes reading accessible to rural children who lack access to physical books or connectivity.
 - Includes a library of levelled phonics books in Bahasa (2000+) and in English (1000+) and a reading tutor that utilizes speech recognition technology. It provides students with personalized reading support and offers teachers the opportunity to develop their digital literacy skills.
 - With a compact download, the platform operates without internet access. It has been downloaded 32,000 times.
- Created an automated voice data collection and organization pipeline to create a speech recognition model designed for Indonesian children.
 - Introduced a gamified app with incentives and comprehensive reporting features.

Partnerships

- Invited by INOVASI, an Australia government aid program, to collaborate with the Ministry of Education and Culture to gain access to schools. 415 educators were trained in the digital literacy program.
- Accepted into the MIT Leap Program which facilitated an analysis of Bookbot's data to assess the impact on students' reading abilities. A problem-solving framework to address challenges arising in Indonesia was developed to assist with documentation for teachers using Bookbot, recommendations were made to enhance the app's functionality and effectiveness.
- Early data from testing the app shows that Bookbot achieved the lowest error-rate speech recognition for Indonesian children, working on-device and offline. Additionally, children improve reading fluency on average by 2X in a year.





Data Science and AI Cohort

\$750K Investment from UNICEF

Nine companies comprising the AI and Data Science Cohort received funding from the Venture Fund in April 2022, of which 5 are female-founded/co-founded. Since kicking off our technical assistance programme in August 2022, the companies have made progress in developing Open Source, A.I. and machine learning platforms for accelerating learning outcomes, generating data to forecast health and healthcare needs, and providing access to online tools at lower costs and in low connectivity settings. **The companies will graduate between June and November 2023.**

\$13.5M Revenue to date
\$11.5M by Portal Telemedicina

\$5.99M Follow on Funding raised

161 Jobs created by the companies

291



01



190K Beneficiaries, of which 8K are women and/or girls

22K Child Beneficiaries

Hours of Mentorship

Certified Digital Public Goods

● Financial Results

● Social impact

● Technical Assistance Results

Final results will be published in fall 2023



Portal Telemedicina

Portal Telemedicina (Brazil) is a telehealth and population health management platform, which integrates medical records and devices and using AI models to detect anomalies and prioritize emergencies.

- With the Venture Fund investment, the platform integrates a platform for children and pregnant and postpartum women, integrating data from different sources on children's health, education, and socioeconomic status.
- Portal Telemedicina is delivering healthcare to over 33 million patients in 280 cities in Brazil and Angola.

- The objective is to create a platform that allows a broad view of children's and pregnant women's health, so that authorities can make informed corrective and preventive decisions about the populations for which they are responsible. In addition, the solution will be designed to generate value for other child health stakeholders, such as schools and the family.

Partnerships

- Signed an agreement with the city of Taruma in Brazil to pilot the solution with access to one year of data. The team has started with child vaccine tracking as a first MVP for testing and adapting the product based on user feedback. The results of the pilot and product testing in Taruma are anticipated to be available in Fall 2023.





Financial Inclusion Cohort, 2021

\$840K Investment from UNICEF

As a continuation from the information provided in last year's annual report, we also wish to highlight the complete picture of the results of the previous blockchain cohort focusing on financial inclusion. The **financial inclusion blockchain cohort, graduated in September 2022**, reached significant results, further validating the Fund's hypothesis that developing in the open results in various avenues for scaling, financial sustainability, and global adaptation for digital solutions.

01 Company Acquired

01 Intra cohort Partnership

\$4M Follow on Funding raised

700K Beneficiaries with increased access to financial services

122K Financial Transactions

500+



Hours of Mentorship

04

Certified Digital Public Goods

● Financial Results

● Social impact

● Technical Assistance Results

More details can be found [here](#)



Insights into blockchain-based Financial Inclusion solutions

Use cases from the cohort during their investment period have—

- Demonstrated the ability of blockchain to enable access by underbanked and unbanked populations to financial services otherwise unavailable to them in conventional financial institutions.
- Made it possible for people to use cryptocurrencies to donate to charities and development organizations (UNICEF).
- Made the delivery of humanitarian aid faster and transparent in low-income and digitally disconnected geographies.

The Financial Inclusion Blockchain cohort, **graduated in September 2022**, provided important lessons from investing in this space. To celebrate the cohort's graduation, the Fund hosted a virtual showcase, "**Venturing Into Blockchain for Financial Inclusion**," which featured thematic panel discussions to share insights on how the newest solutions are leveraging blockchain for financial inclusion in real-world use cases. It also showcased investment opportunities in this space, mobilizing opportunities for startups and getting insights from investors about how they evaluate impact.

- **NFTs NFTs NFTs**; Almost every company is exploring NFT use cases. The challenge is to identify the hype vs. the true value added.
- **Since the Fund invests in early-stage startups, the business models tend to evolve iteratively.** The Fund has seen at least 3 of our startups evolve to be a multi-chain solution, leveraging unique opportunity each chain has to provide (for example transaction fees, native audience, smart contract possibilities etc.).
- **Many of the startups play in areas with no existing playbook or success formula.** The Fund saw strong community engagement from the cohort startups (e.g., opening up bounties for public contributions, constant engagement in social media, crowdsourcing for translation platforms).
- **This cohort has benefited from unique opportunities for additional follow-on funding;** i.e. quadratic crowdfunding.

The Fund will continue to explore strategic pathways for our portfolios to benefit from this.



- **The technology in this space moves FAST.** Both the Venture Fund and investee startups have a responsibility to keep up with the protocols and market trends and adjust accordingly.
- **Crypto fluctuations can have considerable implications** on the companies' project scope and investment outcomes for UNICEF. In 2022 crypto value fluctuated more than 50% in a short time period. The Venture Fund continues to monitor what this means for its investments.
- **Having a cohort thematically aligned allows for increased collaborations and for UNICEF** to further benefit from the digital infrastructure as a way to amplify the underlying technology.
- **UNICEF is one of the world's biggest players in Cash Transfer Programming (CTP)** in the humanitarian and social protection space, transferring millions of dollars to thousands of people worldwide. There has been global interest in the recent past about the application of blockchain technology to bring in improved efficiencies, reduced costs and most importantly transparency and auditability to the space. The ongoing pilot between one of the cohort-companies and the Nepal Country Office will be discussed in the scalable solutions section ahead.



Part III - Outcome 3

Openly Accessible Solutions

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- Qualitative Project Metrics and Open Source Communities 41
- Decentralized decision-making on DPGs through DAO 42
- DPGs: pathfinder results 43





Part III - Outcome 3

Openly Accessible Solutions

Promote and facilitate a local innovation system that promotes Open Source Intellectual Property and scalable Digital Public Goods which have the potential for adoption to solve global challenges.

At the heart of its mandate, the Venture Fund invests in solutions that are locally built, owned and maintained and empower communities to be the drivers of the technology solutions they use. The Fund supports scalable Digital Public Goods that have the potential to be adopted across contexts and solve global challenges. **To this end, in 2022-23, the Fund built and tested new platforms to improve the maintenance and funding for Digital Public Goods (DPGs).**

Over 21900 Open Source
commits



18 Solutions awarded Digital
Public Good Status

723 Contributors to
Open Source Solutions

06 Cross-Cohort Collaborations
on Open Source





Qualitative Project Metrics and Open Source Communities

To foster vibrant, engaged Open Source communities, the Fund plans to introduce a [Discourse-based](#) community forum for our portfolio companies to drive cross-collaboration opportunities and provide valuable insights into each company's progress.

The Venture Fund team has made significant strides in fostering sustainable Digital Public Goods (DPGs) through our portfolio companies. To date, 18 startup solutions have been awarded Digital Public Good status. Most of our portfolio startups fit into the Trusted Vendors archetype where overall project direction is steered by the startups themselves but with encouragement of an active commercial ecosystem based on the project. The benefits include higher levels of trust with open code and open technology, customisation of products, and incentivised adoption through self-hosting. This allows the solution to have an upper hand against proprietary solutions of competitors which can lead to vendor lock in.

As part of the revised Impact Framework, the Fund is also updating the Open Source metrics collected, to include more qualitative metrics to measure engagement. To this end the Venture Fund plans to leverage the [Community Health Analytics in Open Source Software](#) (CHAOSS) project's Starter Project Health Metrics Model to equip companies with the right information to see their progress.

On examining the Open Source metrics we noticed there's often a decline in companies' Open Source activity post-graduation. To address this, the Fund is adopting a new approach in Open Source mentorship centered around community engagement. By allowing open discussions, and empowering internal champions, the Fund aims to foster lasting involvement around the Open Source product.



Decentralized decision-making on Digital Public Goods through DAO

A Decentralized Autonomous

Organization (DAO) is a member-owned community where the decentralization of specific decisions can automatically facilitate cryptocurrency transactions. The DPG DAO Project aims to decentralize the decision-making around the funding of some aspects of Digital Public Goods.

In traditional funding models, when a donor provides funding for a Digital Public Good (DPG), the core project team typically has the most significant influence over the product roadmap. Although feedback may be gathered from various stakeholders, such as collaboration partners, implementation agents, or beneficiaries, it is often considered an afterthought rather than a structured and intentional process.

Pilot 1 was conducted in late 2022 to test out the voting process and general logistics behind setting up a DAO using an existing platform called Snapshot where no additional development efforts would be required. While no funding or monetary incentive was provided, CBoard, a vetted DPG, was excited to participate in the pilot. **The pilot challenged them to adapt to a new form of decision-making based on blockchain principles, and CBoard welcomed the opportunity.**

This can be achieved by giving a greater voice to implementation partners and community members who benefit the most from the development of new features or updates to existing functionality. By building and piloting a DAO, the UNICEF Office of Innovation sought to test out a mechanism that fosters a more inclusive and collaborative approach to funding innovative solutions, empowering a wider range of stakeholders to contribute to the development of Digital Public Goods.

Currently, the Digital Public Goods team is working on the next iteration of the prototype which will be piloted with a DPG and its community of stakeholders in mid 2023.

Proposal Cycle



Funds Cycle





Digital Public Goods: Pathfinder Results

UNICEF Ventures successfully leveraged shared value through the Venture Fund investments and Global Digital Public Goods work. The DPG Pathfinding pilots aligned with national priorities, leveraged local opportunities, and adhered to the DPGA Country Engagement Guide. Detailed updates on Digital Public Goods Pathfinder country results can be found in the [annex](#).

After successfully completing the Pathfinder pilots, UNICEF is now focused on empowering future generations to shape the world's digital future.

In addition to DPG initiatives funded by other donors in Brazil, Ghana, Jordan, and Kazakhstan, the Venture Fund has extended efforts to include fragile and conflict-affected states like Comoros, Lebanon, Palestine, Niger, and Sudan. The aim is to activate and enhance local ecosystems by providing resources and training to young people, upskilling them to become impact-driven tech entrepreneurs and builders of Digital Public Goods.

This effort is dedicated to empowering the next generation of responsible, sustainable, and community-oriented digital innovators and citizens.



Part III - Outcome 4

Scalable Solutions

▪ Indicators	-----	45
▪ Growth Funding	-----	46
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▪ Joint ventures: Scaling solutions with Country Offices	-----	49





Part III - Outcome 4

Scalable Solutions

Validate and pilot technology solutions which can be scaled to improve the lives of children in UNICEF country offices and programme countries. The fourth outcome area of the Venture Fund focuses on the role of the Fund to validate and pilot technology solutions which can be scaled to improve the lives of children in UNICEF country offices and programme countries. In 2022-23, the Fund continued fostering cohorts of larger growth funding recipient startups to accelerate and position to scale. As well, the Fund built co-investments across portfolio startups and UNICEF's Country Programmes to validate solutions and to generate evidence of the potential impact of these solutions for the organization.

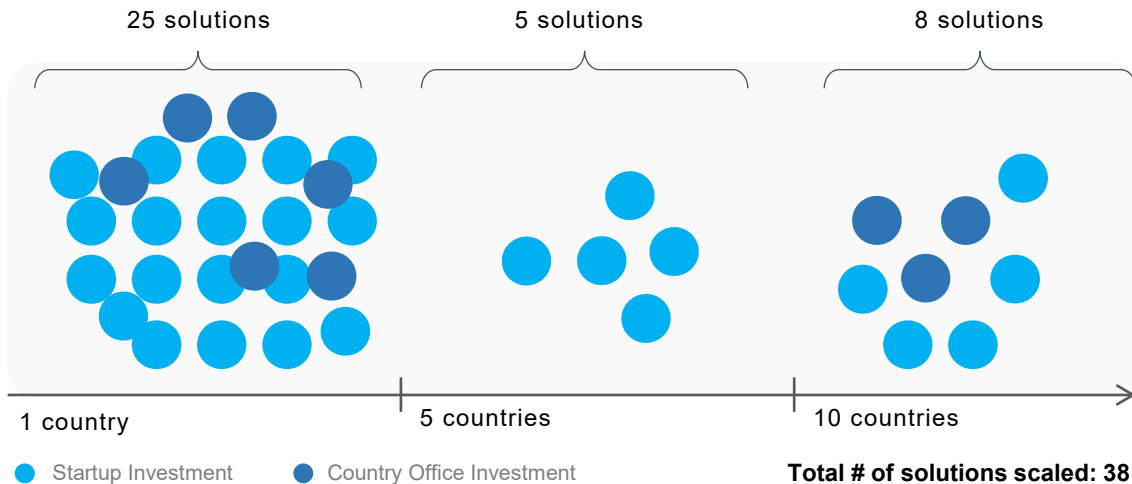
16 Startup Collaborations with UNICEF Country Offices

↑ 4 from last year

18 Companies placed on LTA after investment period

↑ 4 from last year

Number of solutions scaled





Of 12 companies,

11 Received bridge funding
(< \$200K)

01 Selected for acceleration
program (< \$400K)

06 Graduated
Companies

06 Graduating in
September

03 New case
studies

200 Hours of
mentorship

Growth Funding

The UNICEF Venture Fund's growth funding is comprised of twelve companies through two funding rounds, commencing in December 2021 and April 2022.

These innovative companies span a range of sectors—from artificial intelligence and blockchain to geospatial analytics and digital learning—and go through more intensive technical assistance from the Fund to strengthen the quality of their Open Source code (especially in UNICEF priority areas), grow the evidence base that illustrates how they can accelerate results, gain access to innovators and ecosystems in new markets (especially through increasing collaboration with UNICEF Country Offices), and to validate product-market fit as a basis for scaling within UNICEF.

With the support of the funding, these startups have worked to amplify their impact and expand their reach to create positive change in various domains.



The UNICEF Venture Fund's growth funding portfolio

16% Of Fund's portfolio

66% of growth solutions have scaled to other countries

48 deployments with UNICEF Country Offices

16.4M Total Number of Beneficiaries

40% of the portfolio's beneficiary reach

\$2.5M Funds Invested

Nine

New Pilots to test features

One

Successful Exit

\$3.1M

Funds Raised

40

New Markets

40% Average Revenue Growth

04 Certified Digital Public Goods

02 Awaiting DPG certification



Growth Snapshot:

Pixframe Studios

A timeline of Pixframe's journey to scale, from getting seed funding for a game-based learning solution to working with government to **reach 1.5 million children in 2023 alone.**

- **Towi** is a Game based learning platform to assess and develop children's cognitive skills
- **MatematIA** is a personalized gaming platform that helps adolescents develop their math skills



2018

UNICEF Seed Funding to develop Towi



2020

Collaboration with UNICEF Mexico Country Office to build **MatematIA**

Partnership with Government of Mexico in response to COVID-19 reaching 100K users



2021

UNICEF Bridge Funding



2022

UNICEF Quadratic Funding with Bitcoin

Pixframe becomes a Digital Public Good



2023

Partnership with Government of Guatemala to scale Towi and **MatematIA** reach 1.5M children





Joint Ventures: Scaling solutions with Country Offices

By leveraging UNICEF's extensive presence across 190 countries and territories and its established relationships with governments and local communities, early-stage companies can maximize the longer term adoption, rapid scalability and global impact of their digital solutions.

In turn, UNICEF and its partners, can tap into the creativity, agility and entrepreneurial spirit of technology startups, bringing fresh perspectives and disruptive solutions for addressing complex challenges more effectively.

Thanks to the two investment tracks to startups and UNICEF's Country Offices, the Venture Fund is able to match startup graduates/investees with UNICEF Country and Regional Offices to jointly test, refine and scale new solutions on-the-ground.

This unique pairing enables the private and public sectors to collaborate, co-iterate and customise early-stage solutions according to specific local needs. This will enable more successful deployments, generate evidence of impact and insights, and create market opportunities.

The Fund's joint investments can play a catalytic role in leapfrogging development through innovation ecosystems, technology transfer, job creation and economic growth.

- [Harnessing geospatial data for UNICEF's East and Pacific Region](#)
- [Digital parenting companion for child health and development across Europe and Central Asia](#)
- [Blockchain-based digital relief distribution for Cash Transfers](#)
- [Leveraging learnings from drone corridors to support drone programming at UNICEF](#)



Recipient of the highest funding tier, Acceleration Funding, Thinking Machines (The Philippines) has been working with the UNICEF East Asia and Pacific Regional Office (EAPRO), to develop the foundation for ten times more AI research in Southeast Asia through the **AI4D Research Bank**.

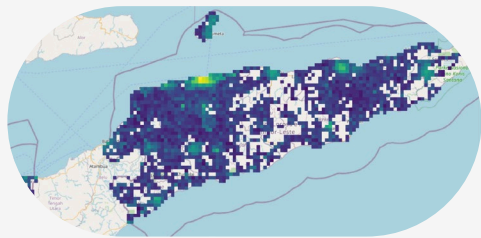
I. Harnessing geospatial data for UNICEF's East and Pacific Region

Based on Open Source principles and methods, this partnership has successfully produced three key products that meet UNICEF programme needs in the region:

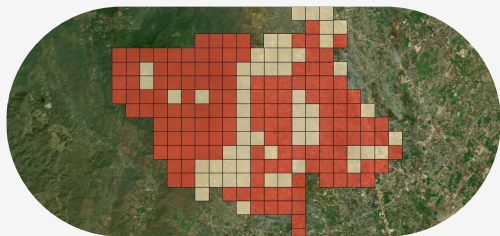
- I. Geowrangler (Python library to speed up geospatial data processing)
- II. Poverty Mapping (cross-country machine learning model for mapping relative wealth estimates)
- III. Air Quality (model on remote sensing data to estimate particulate matter PM2.5)

I. GeoWrangler

- Used for insights on climate, internet access, and microfinance
- Reduces data cleaning and engineering costs (which can typically take up to 60% of startup costs)
- Making processing of humanitarian geospatial datasets easier and faster



Predicted Relative Wealth Index, Thailand 2023



Haze estimation model rollout in Chiang Mai, Thailand for December 2021

II. Poverty Mapping

- Provided interpretable wealth estimates using open datasets in Cambodia, Myanmar, Philippines, Timor Leste, Indonesia, Laos, Malaysia, Thailand, and Vietnam
- Demonstrated feasibility of producing generalizable wealth estimation models purely from open datasets. This opens poverty mapping – which typically requires substantial computing power and proprietary data accessible only to a few institutions – to a wider and more diverse range of actors.

III. Air Quality

- Trained a machine learning model to estimate particulate matter PM2.5 at the district or village level using a combination of satellite data, low-cost sensors, and big data in Thailand.
- Realtime air quality estimates produced for 878 districts across Thailand
- Estimation model trained on globally available datasets, with opportunities to scale to 150+ countries
- Accuracy of 0.59-0.87 r2, when benchmarked against high-quality reference-grade ground sensors

These three will be integrated into the AI4D Research Bank, an open web application that essentially provides organizations with access to code, documentation, pre-processed datasets, and machine learning model training references to augment hard-to-acquire ground truth data needed to efficiently and effectively carry out humanitarian and development projects and programmes.

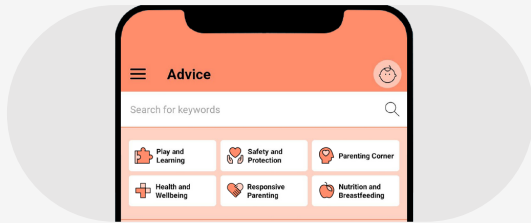


II. Digital parenting companion for child health and development across Europe and Central Asia

In 2020, the Venture Fund supported the regional office in the development and launch of [Bebbo](#). This mobile tool is designed to empower parents with evidence-based guidance, knowledge, and confidence to help them nurture their child's health and development from birth to age six.

The interactive application serves as a resource for parents, covering various parenting topics, including breast pumps, baby weaning, learning, toys, and child protection. Since its initial pilot in Serbia, the Bebbo app has rapidly expanded and is now available in **14 languages across 14 countries** in Europe and Central Asia. The Open Source solution is co-owned by Governments in each of the countries.

Bebbo is also used in emergency response to support parents in war-torn Ukraine and neighboring countries where they took refuge. **It has onboarded 800K parents/caregivers and children on the app, indirectly reaching approximately 150K beneficiaries.** The app's success has prompted plans for further expansion, with two additional countries set to be included, and AI & ML-enabled enhancements for personalized recommendations.





UNICEF Nepal and the Venture Fund Blockchain cohort graduate, Rumsan (Nepal), initiated a pilot in 2022 with the Nepalese Government and local municipalities.

III. Blockchain-based digital relief distribution for Cash Transfers

In the years since 2016, UNICEF has worked to be at the forefront of Humanitarian Cash Transfers (HCT) in particular. In 2022, \$631M reached 2.1 million households. With this, and with the trend for increasing HCT activity, innovation in Cash Transfer has been an area of focus for the Venture Fund in 2022-2023, with particular focus on the potential of **blockchain technologies**.

These alternate rails can make the **cash transfers faster, cheaper, more inclusive and more transparent while improving the experience of the beneficiaries on the ground**.

Piloting Rahat in Nepal in collaboration with UNICEF

- Using the Rahat platform, developed by Rumsan, a blockchain approach to cash and voucher assistance was implemented in in Jaleswor, Madhesh Pradesh in rural Nepal, with a particular focus on flood prone areas and across users that are banked and unbanked, with or without mobile phones.
- **The blockchain solution Rahat issues, manages and monitors cash distribution in the form of digital tokens and lets beneficiaries use their feature phones or unique QR code cards to easily redeem their tokens for cash.** In the pilot, Rahat also empowered Palikas – the rural municipalities - to monitor their distribution efforts efficiently and improve their ability to report back to donors.





By using Rahat, UNICEF Nepal sought to have access to a common real-time monitoring and reporting of the distribution process. Overall sentiment was of enthusiasm and satisfaction from local government officials and beneficiaries.

“The distribution of cash this time was done transparently and fairly. The beneficiaries received the exact cash that is mentioned in their mobile.”

– Ajay Kumar Sharma, Ward Secretary, Jaleswor Municipality

“The cash was distributed directly to the intended recipient, leaving no possibility for anyone else to claim the money. Upon receiving a message on our mobile devices, we were able to promptly proceed to the office and collect the cash.”

– Rakhi Kumari Mandal (Unbanked Beneficiary), Jaleswor Municipality

45% Women Impacted

31% Phoneless beneficiaries served

17% Underbanked Beneficiaries served

7.7% Landless beneficiaries

2% People with disabilities served

1900 Total Beneficiaries

2000 Children Reached

9814 Lives Impacted

28 seconds

OTP transaction time speed

Conventional cash transfers, which cover multiple steps from beneficiary registration to actual pay-outs can take several days.



To better understand the opportunities that blockchain technology can have in this space, the Venture Fund performed a solution mapping exercise of previous global pilots, analyzed the potential pathways for fund flows and are currently engaged in a deep dive research into identifying specific pilot countries and local solution pathways in each country to help build and execute these pilots. In general, we are particularly interested in building evidence through piloting two use cases:

- **Public blockchain based cryptocurrency cash transfers with options for varying levels of off ramps.** Solutions built on public blockchains using cryptocurrencies have the advantage of potentially saving transaction fees and foreign exchange fees in cross-border transactions, providing unprecedented levels of transparency to the money flow and improving beneficiary experiences through careful wallet design.
- **Permissioned Blockchain Ledger based solutions within a closed loop of stakeholders.** Solutions built on permissioned blockchains which track multi-stakeholder activities and movement of fiat currency improve transaction visibility, transaction granularity and reporting quality thereby potentially leading to operational efficiency gains. This modality is currently being piloted by UNICEF Nepal and Fund investee Rumsan.



IV. Leveraging learnings from drone corridors to support drone programming at UNICEF

UNICEF's global work on drones has for several years focused on building sustainable environments and ecosystems for use cases of drones, instead of focusing on only individual pilots. This has included establishment of drone corridors, building of local capacity, and establishment of global partnerships.

The global coordination function also enables UNICEF to leverage learnings from piloting to UNICEF's core programming, for instance in the humanitarian space.

- [Drone-acquired imagery to enhance flood modelling and disaster preparedness and climate change management in Malawi](#)
- [Establishing a medical drone delivery network for last-mile delivery in Namibia with Venture Fund graduate, Cloudline \(from South Africa\)](#)
- [Drone corridors in Kazakhstan and Malawi – institutionalization and continued activities](#)
- [Scaling the Africa Drone and Data Academy \(ADDA\) model to build local capacity](#)





Drone corridors in Kazakhstan and Malawi – institutionalization and continued activities



In **Kazakhstan**, the drone corridor was **officially handed over from UNICEF to the National Disaster Response Agency**. This is the first instance of UNICEF handing over a drone corridor to the government. In Malawi, by the end of 2022, the Malawi Drone Corridor has hosted between 6,000-7,000 flights, supporting multiple projects and different organizations, including GIZ and the Gates Foundation. Two models of operations are used in the Malawi drone corridor: cargo operations improving last-mile medicine delivery as a part of routine health supply chain; and mapping operations for emergency response and disease risk mapping.

Scaling the Africa Drone and Data Academy (ADDA) model to build local capacity



The Africa Drone and Data Academy (ADDA) strengthens local capacities for using drones & data for good to promote community-driven problem-solving of global & regional issues, particularly in fragile contexts. Highlights from ADDA in **Malawi** include **700 young people graduated**, with **60+% women**. ADDA Malawi **management has been handed over to Malawi University of Science and Technology** and the accreditation for a national technical and vocational training scheme (TVET) has initiated in Malawi.

The Venture Fund has supported the scale-up of ADDA by helping establish the first Francophone academy in **Niger** with a localized Open Source curriculum. UNICEF is also creating a DPG incubator to offer graduates an alternative pathway to employment as tech developers and entrepreneurs of DPG-registered solutions. Additionally, there are plans to re-design ADDA's centralized structure into an open, scalable business model through social franchising.



New Drone Use Case in Country Office

Drone-acquired imagery to enhance flood modelling and disaster preparedness and climate change management in Malawi



UNICEF Malawi is developing a flood model and impact-based forecasting tool using drone imagery. It will allow predicting flooding events and other climate-related hazards and estimating their effects on infrastructure, facilities, households, and other critical assets.

The aerial data collected, a total of **144K+ images covering over 5,000km**, supplement the limited satellite coverage in Malawi and provide more accurate and up-to date, geo-referenced data. It has been processed into digital elevation models crucial for developing the forecasting tool. The resulting Open Source early warning system has the potential to benefit approximately **320,000 people in Malawi**, as well as other countries susceptible to extreme weather events.

New Drone Use Case in Country Office

Establishing a medical drone delivery network for last-mile delivery in Namibia



UNICEF Namibia, in collaboration with South Africa-based startup and **Venture Fund investee Cloudline**, are implementing a medical drone delivery to transport specimen samples, vaccines, and medical commodities. The project seeks to assess logistic requirements, feasibility, cost efficiency, and the impact of using drones to overcome inaccessible road conditions caused by annual floods lasting up to six months.

The Namibia Country Office has completed site assessments, stakeholder demonstrations, and mapping exercises to establish the regulatory environment. Drone operations are scheduled to commence in August 2023.



Part III - Outcome 5

Evidence Generation

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- Insights and learnings on the value of Artificial Intelligence 62





Part III - Outcome 5

Evidence Generation

Evidence generation across the portfolio looks different depending on the stage of the company, the type of solution, the proximity to users, and resources to engage in deeper research. The Fund is increasingly working more systematically with investees to ensure that they are able to improve their capacity to generate evidence. **This includes solicitation of reports that may offer further insight and knowledge around the solutions as they continue to iterate.**

I. Building investees' capacity to generate evidence

In April 2023, a **five-part workshop was held to strengthen startups' capacities around data management, research and evidence generation, and data privacy and security**. Alongside this were mentorship sessions on evidence generation which focused on helping investees set realistic goals around their spheres of influence and identify opportunities to generate more rigorous evidence proving their solution's efficacy.

II. Promoting institutional learning through evaluations, journals, and other research pieces

- For UNICEF Nepal's pilot of **Rahat**, an external process evaluation is underway to generate learnings, focusing not only on the impact of Rahat in making existing cash transfer efforts more transparent, efficient, and effective, but on identifying the right conditions under which blockchain solutions can be adapted and scaled to a greater number of cash transfer programmes in Nepal and globally.
- **Afinidata**, an AI solution supporting parents in early childhood development, has multiple randomized control trials (RCTs) ongoing, including one in Brazil in collaboration with national government, due for publishing next year.
- Child online safety company **Talk2U** publishes RCT results in peer-reviewed journals to validate their solution's effectiveness.
- Portfolio graduates **Ideasis**, **Imisi3D**, and **Veatve Labs** were featured in UNICEF Innocenti's *Rapid Analysis: The Metaverse, Extended Reality and Children*.



III. Leveraging events to disseminate learnings from, for, and about the Fund's portfolio

Within the reporting period alone, multiple events were held within UNICEF as well as externally, which the Venture Fund team and startups participated in to disseminate learnings about the Fund's portfolio.



DevCon panel on Blockchain with startup founders from Xcapit, Treejer, and Rumsan



UN DSG Amina J. Mohamed on synergies for an inclusive and secure digital future. © Jonas Borg



Tilli and Nubian VR founders representing youth in tech at UN HQ

- In October 2022, the Venture Fund team and three founders from the **newly graduated 2021 blockchain cohort** attended **DevCon** in Bogota, Colombia to discuss real-world use cases of Open Source blockchain tech in social impact.
- During a two-day visit to Stockholm, Sweden in February 2023, **UN Deputy Secretary-General Amina Mohammed** joined a roundtable with young tech innovators, diplomats, and executives from Ericsson and the Swedish Games Industry. The roundtable, co-hosted by the Office of Innovation, explored the emerging Global Digital Compact priorities to deliver an open, free, inclusive, and secure digital future - with youth at the forefront.
- In April this year, Founders of two startups within the Venture Fund portfolio—**Tilli**, AI-powered gamified social-emotional learning for kids and **Nubian VR**, which provides WebXR localized learning content—**attended the United Nations Youth Forum of the Economic and Social Council (ECOSOC Youth Forum) at UN HQ in New York to give recommendations and innovative ideas** in preparation for the SDG Summit.



Spotlight:

Insights on the value of Artificial Intelligence

The Venture Fund has long engaged with Artificial Intelligence (AI) as a technology to accelerate results for children. AI is being integrated into various projects across UNICEF including, the [Giga school connectivity initiative](#); improving accessibility of [digital textbooks](#) and learning systems; supporting [mobile youth platforms](#) that empower millions of young people, [epidemic forecasting](#) analysing risk factors for diseases such as Zika and Dengue and [to inform public health responses](#).

This year the Fund took a look back to assess and take stock of the learnings from the investments in this space. Investments from the Venture Fund in AI and data science activities, more broadly, have made contributions across the key UNICEF thematic areas. They can be categorized as falling within 4 main archetypes of AI:

1. Applications of recommender systems which suggest relevant content to users based on user-provided inputs, or personalization. These are focused on adaptive learning and employment matching.
2. Computer vision applications that detect objects using satellite imagery, document recognition, and health screenings. Also, identification of objects, places, people, writing and actions in image.
3. Automatic speech recognition (ASR), involving natural language processing (NLP) and natural language generation (NLG) techniques and often chatbot assistant services.
4. Predictive inference applications, which predict the likelihood of occurrence or some measurable quantity using past data (or even data close to real-time).



01. Investments in applications of recommender systems which **suggest relevant content to users based on user-provided inputs, or personalization**. These are focused on adaptive learning and employment matching.

Pixframe, based in Mexico, recommends learning content and assessments to children during game-based learning play. The company has used recommender system approaches, such as collaborative filtering and content-based filtering to develop learning platforms used to assess children's cognitive and mathematics skills.

Afrilearn, based in Nigeria, provides personalized learning experience and improves course discovery to African children, primarily in high school. Afrilearn's application is intended not just to improve the experience of children using the application, but provide information to school administrators, educators and parents on student progress. **Giraffe**, based in South Africa, developed a job portal connecting employers and jobseekers using a recommender system matching function.

02. **Computer vision applications that detect objects** using satellite imagery, document recognition, and health screenings. Also, identification of objects, places, people, writing and actions in image

This has been an important archetype of AI investments. **Dymaxion Labs**, based in Argentina, created a computer vision platform that analyzes geospatial data including optical, synthetic aperture radar and aerial imagery, climate data and remote sensors to detect objects and support decision making of non-governmental organizations, governments and private sector actors. **I-Stem**, based in India, created an application that converts inaccessible documentation content, including websites and mobile applications, into accessible formats for people with disabilities. **Neural Labs**, based in Kenya, applies computer vision techniques in their platform to identify and localize respiratory lesions and score diagnoses of respiratory diseases in a timely manner.



03. Automatic speech recognition (ASR), involving natural language processing (NLP) and natural language generation (NLG) techniques and often **chatbot assistant services**

Weni, based in Brazil, deploys chatbot virtual assistance services and NLP application that allow for the customization of chatbots built for less common languages, including Weni's native Brazilian Portuguese. **OTTAA** Project, based in Argentina, serves an alternative and augmentative communication tool that gives users with disabilities the ability to communicate, express their feelings and basic needs through sentence completion using pictograms. **OTTAA** is also experimenting increasingly with NLG to enhance communication for users with disabilities. **Bookbot**, based in Indonesia, created an on-device speech recognition application for children learning to read aloud, providing instant feedback and rewarding progress targeted to the Bahasa Indonesian language. **Om3ga**, based in Serbia, developed speech-to-text and text-to-speech applications to facilitate conversation and serve as a classroom assistant for people with disabilities in Balkan languages.

04. **Predictive inference applications**, which predict the likelihood of occurrence or some measurable quantity using past data (or even data close to real-time)

Investments into this space have cut across predicting poverty measures, health epidemics, health status, climate impacts and internet connectivity is the other main archetype of AI investments. **Thinking Machines**, based in the Philippines, developed an application that predicts poverty levels and socioeconomic conditions using alternative digital data sources, such as satellite imagery, social media, e-commerce data, and crowdsourced maps. **Cirrolytix**, based in the Philippines, developed their Project Aedes application that predicts the incidence of dengue hotspots using crowdsourced digital sources, official climate and health data for epidemic management. **Jobzi**, based in Brazil, predicts school connectivity and the social and economic impacts of school connectivity using official and crowdsourced digital sources. **Avyantra**, based in India, predicts early diagnosis of neonatal sepsis using data from newborns with neonatal sepsis conditions and treatments.



Several investments have proven to be valuable solutions to governments, private sector actors and UNICEF offices. AI investments have added value through several mechanisms —

1. As a catalyst for future innovations through Open Source development. Open Source development has meant that these companies receive contributions from the developer community and can pull in new features from the Open Source community to enhance their product build.
2. Investments meet local needs not met in the current market, most notably for marginalized and under-served populations.
3. They improve the ability of social enterprises and NGOs to achieve objectives. By working with social enterprises and NGOs, they improve the operational capacity of these entities to deliver to their target populations.
4. These investments are driven by the social mission generating impact for UNICEF priority areas.

In practice, companies working with privately-sourced data typically have higher acquisition costs and often need to spend more time seeking partners to engage with in order to capture the necessary data to develop models. Conversely, companies working with open or public datasets tend to be less encumbered from a data acquisition perspective, but perhaps may acquire data with larger lag times.

Challenges experienced by investments have had to do with **data constraints and changes in modelling approaches and model focus**. For example, changing stakeholder or client demands has led companies to pivot away from their original technical strategy, creating issues of resolving “technical debt” or pieces of development code that need to be significantly refactored to be suitable to meet the needs of a new strategy. There is also a **dichotomy observed between projects relying on training models with open, public datasets with outcomes intended for policymakers and researchers verses projects relying on private data** (namely, data contributions sourced from individuals or non-public entities) with outcomes intended for personalized or entity-specific use. There **are also technical issues around data storage**, especially for companies working with large volume or large file size data (namely, image data). Finally, a technical challenge to achieve performant models has to do with deciding when to retrain models following changes in underlying data sources.

Part IV

Moving the Fund into the Future

Focus areas for 2023-2024

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Part IV

Moving the Fund into the Future

Over the past year, the Venture Fund team has taken pause to connect with contributors and cohorts alike and reflect on how we move the Fund into the future. After many successful years, we wanted to understand the core value the Fund brings to UNICEF, our Fund contributors, our investees and those we exist to support.

Over the coming year, the Fund will consolidate the foundations that have led to our successes and build upon these with initiatives and activities that position us for an even more successful and sustainable future. The following outlines our core focus areas for the year ahead:

Focus areas for 2023-2024

I. Futureproofing the Fund

- **Sustainable Streams** – In 2023-24, the team will be pursuing initiatives to grow and diversify our inbound funding streams in fiat and cryptocurrency. This includes exploring new contributors, regenerative funding mechanisms and new ways to leverage contributions. The Fund will also call on our donors and partners to bring together like-minded peers.
- **'Return' models for the Fund** – The Fund will work closely with the most successful portfolio companies to turn them into contributors and in turn allow us to support other companies like them.
- **Growing innovative models** – Drive resources to Venture Fund investees and the Fund itself by expanding innovative funding models such as quadratic funding and gamified giving.

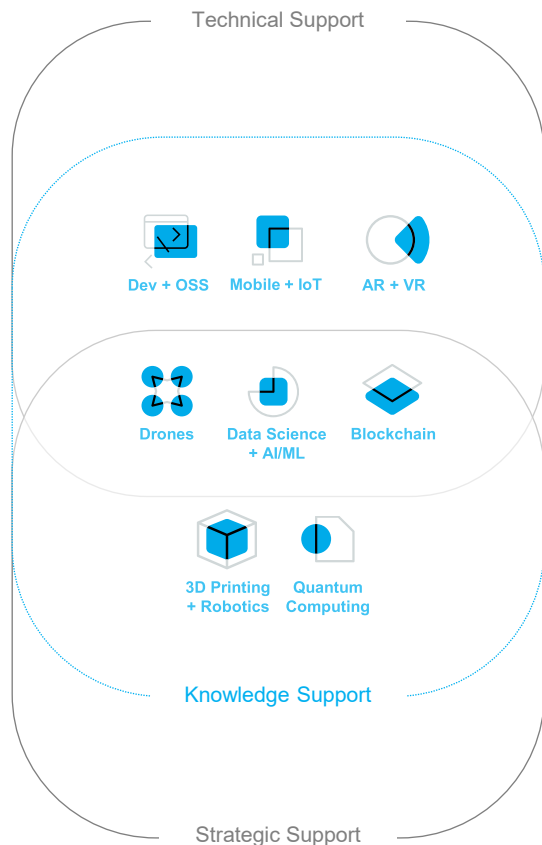
II. Taking the local global

The Fund has a strong track record for intentionally investing for more equitable returns by building and supporting Open Source solutions. We seek to improve returns into the Fund from the Open Source IP through new models that allow us to shape global discussions and platforms.

Developing and making solutions available on Open Source licenses - and as digital public goods - presents a critical equalizer to ensure access to services and opportunities for all, especially in low resource settings. As a leader in Open Source, UNICEF Ventures is working to position support for digital public goods through key policies within the UN system and beyond. This includes the development of the **Global Digital Compact, the Summit for the Future** – and shaping a global Charter that will raise financial and other pledges from key donors and partners.

III. The Venture Collective

One notable reflection from partners and co-founders alike, was an aspiration to feel more connected to the Fund, its people and its purpose. To respond to this, we will explore ways to bring together those who interact with the Fund. We want our Fund to feel less transitional and more like a community of like minds who care about investing in technologies that will create a better world for children. To do so, we seek to form a multi-stakeholder Collective to shape and challenge internal and external thinking on frontier technologies and investments. As champions of the Fund, the Collective can support us in building local communities of problem-solvers and drive catalytic funding towards innovating for children.



IV. Frontier Foresight for UNICEF:

- Technology as a Service** – UNICEF Ventures has in the past year strengthened the appropriate technical team in high priority technology areas, particularly in Drones, AI and Blockchain. This investment enables the Venture Fund team to use our extensive exposure and practical experience with AI and other frontier tech as a service for other teams and offices across UNICEF providing technical partnership, knowledge and learning sessions, and strategic guidance.
- Advancing an AI Strategy** – The Ventures team continues to spearhead the development of the AI Strategy for UNICEF. As the scale and velocity of AI expansion continues to increase dramatically, the need for the consideration and development and of child-centered AI becomes more critical. UNICEF intensified its consultations to ensure an appropriate, ethical strategy is deployed in line with UNICEF Strategic Plan 2022-2025 and the Sustainable Development Goals (SDGs) for children. Further, this AI strategy, which will remain a living strategy to continue to provide guidance for UNICEF's approach to AI in a most dynamic space.

V. CryptoFund Consolidation

Together we will build on the success and knowledge generated through the CryptoFund pilot. To strengthen efficiency, efficacy and impact of the CryptoFund for UNICEF's mission, the focus for the institutionalized UNICEF CryptoFund for 2023-2025 will be to:

- Strengthen alignment with programmatic and strategic needs for UNICEF by exploring the use of crypto for new modalities and programmatic use across the Office of Innovation.
- Expand agility in response to new trends by diversifying the crypto basket against a set framework and criteria at regular intervals.
- Develop inhouse capabilities to improve and integrate accounting processes with regular UNICEF procedures.
- Work with a third party to estimate the carbon footprint and conduct a cost-benefit analysis to offset the carbon emission for the transactions and holdings of the UNICEF CryptoFund.

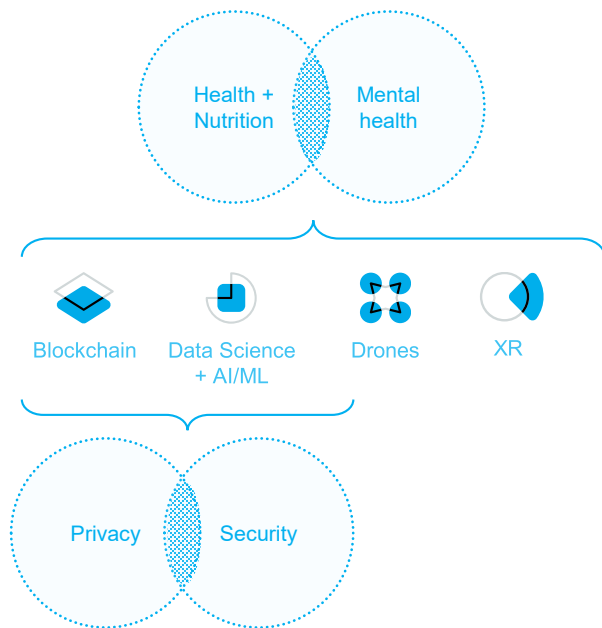
VI. Future Calls

After years of designing and shaping calls, the Venture Fund has continuously refined our approach to ensure we attract and prime the most promising solutions for scale. For the 2023-24 calls, the Ventures team will be collaborating closer with partners, stakeholders and internal teams to ensure that investments have an even greater trajectory for success and scale. As demonstrated through the 2023 Climate Call, these collaborations have leveraged diverse experience and expertise for greater potential impact for children.

- In August 2023, the Fund will launch a new call for applications focused on *Strengthening Systems for Health, Nutrition, Mental Health and Psychosocial Support*. The key areas of frontier technology exploration will include:

- equity and access to services
- improved data generation and analysis
- strengthened workforce capacity, especially in fragile context and vulnerable population

- Tech adoption at scale brings challenges around **privacy, trust, and security of identity** into sharp focus. Later in the year, the Fund will explore emerging technologies to pave the way for safe and efficient exchange of information, ways to enhance transparency of institutional systems, streamline processes and protect people's rights. For example: encryption technologies such as *Zero Knowledge Proofs* can help to provide irrefutable proof without revealing the underlying data. This could potentially help to mitigate security risks of storing sensitive information on public blockchains, thereby helping scale certain programs globally.



UNICEF Venture Fund 2023

Annual Report Annex



office of
innovation

Impact Measurement Framework



Market Shaping

Catalyze investments to de-risk technologies, foster diverse businesses (founders, talent, products), and drive funding towards under-represented markets

OUTCOME 1

VF Contribution

VF makes investments in different dimensions

1.1 Channeling investments to underserved founders and markets

VF Contribution

Diversity and inclusion considerations are built into the investment process including the usage of scoring criteria to select businesses.

1.2 ↑ growth of VF's investments in underserved founders and markets

VF Contribution

Intentional raise, deployment and measurement of capital allocation over time to grow investments

VF Contribution

Considerations built into investment process

INDICATORS

Total funds invested in diverse founders, frontier tech areas, and thematic areas

of countries invested in (this year / total)

of CO investments made

% of investments in emerging markets (disaggregated by lower income country, lower middle-income country and middle-income country)

% of businesses with at least one woman on founding team (all investments)

% of active companies with at least one woman on the founding team

% of women in senior leadership in VF portfolio

% share of women in the workforce

of products/services that specifically/disproportionally benefit women/girls

Total Fund Value, #Total Investments made (fiat/crypto)

of calls, EOIs, RFPs

New donors

New funds raised by the VF

of early-stage investments

of new cohorts onboarded

% of investment \$/crypto

THEMATIC INDICATORS

and \$ of investments made per thematic area

of gender-smart investments made (2X criteria)

of investments made that target PLWD as beneficiaries and/or users

of investments made in humanitarian contexts or solve humanitarian challenges



Impactful Business

Build the capacity and sustainability of OS businesses which have the potential to deliver solutions in impactful sectors that can improve the lives of children

OUTCOME 2

VF Contribution

(Indirect) Venture Fund provides additional support to investees to facilitate introductions to investees or potential partners for acquisition

2.1 Improved sustainability of businesses

VF Contribution

(Indirect) Diverse mentorship is offered to investees who by mentors who provide technical assistance and mentoring to design and implement their business strategy

2.2 Improved uptake and reach of solutions

VF Contribution

Capital investment, mentorship and technical support to conduct pilots helps investees to scale their reach

VF Contribution

Capital deployment of VF used to scale reach

INDICATORS

and % of companies that have successfully raised follow on funding
of companies acquired + exit ranges

% of companies generating revenue (of active companies)
% of companies generating profit (of active companies)
of jobs created (ft/pt/m/f)
of companies inactive (disaggregated by failure and drop-out)
% of companies active (all time)
of companies that graduate from mentorship (early stage/bridge) (per year)

of **customers** (B2C, B2G, B2B) (unique)
of **beneficiaries** (unique)
total users/ unpaid users (unique)
of children reached through the solution (beneficiary, user, customer)

THEMATIC INDICATORS

% of follow-on funding raised by women-led businesses
% of companies with female founder acquired
of beneficiaries reached per thematic area
of beneficiaries reached (people living with a disability) of follow-on funding raised by women-led businesses
of women reached through the solution (beneficiary, user, customer)
of beneficiaries reached in humanitarian context



Accessible Solutions

Promote and facilitate a local innovation system that promotes OS IP and scalable digital public goods which have the potential for adoption to solve global challenges

OUTCOME 3

VF Contribution

(Indirect) VF facilitates DPG status which enables access to the Open Source solution globally.

3.1 Increased availability and accessibility of OS technology

VF Contribution

OS considerations built into investment process and OS mentor works to ensure OS commitments are maintained and of high quality.

3.2 Enhanced ecosystem of Open Source actors

VF Contribution

OS mentor manages the OS group and VF staff promote OS learning across UNICEF

VF Contribution

OS considerations built into investment process

INDICATORS

of VF funded Open Source solutions viewed (# of stars)
 # of VF funded Open Source solutions accessed (# of forks)
 # of external community members are opening pull requests and issues

% of companies using an **Open Source license for the technology** at the core of their product
 # of Open Source commits
 # of companies awarded DPG status
 # contributors
 # pull requests open / closed

of members of VF's OS forum
 (companies + external parties i.e., investors)
 # of **new members** of VF's OS forum
 # of **OS collaborations** across portfolio (cross-community collaborations)
 # of **outreach events** held by or attended companies
 # of unique users, contributors and maintainers

THEMATIC INDICATORS

of OS solutions which cut across more than one thematic area (disaggregated by geographic region)



Scalable Solutions

Validate and pilot technology solutions which can be scaled to improve the lives of children in UNICEF country offices and programme countries

OUTCOME 4	INDICATORS
<p>VF Contribution VF and OOI facilitate OS technology into UNICEF programme countries</p>	<ul style="list-style-type: none"> # of solutions that are integrated in UNICEF system, process or programme % of solutions in the growth stage of portfolio processes % of solutions that have scaled beyond country of origin/incorporation # of users, beneficiaries or customers reached through VF pilot or CO investment
<p>4.1 Solutions validated and adopted through COs, hubs, and portfolios</p> <p>VF Contribution VF and OOI facilitate OS technology and/or investees into UNICEF programme countries through pilots</p>	<ul style="list-style-type: none"> # of CO pilots initiated by CO and/or startup # of bridge investments # of accelerate # of CO projects supported # of companies that are placed on an LTA after investment period # of contracts issued to VF companies using LTAs # of COs exploring and/or piloting new technology areas for the first time
<p>4.2 Enhanced geographic reach of Venture Fund solutions</p> <p>VF Contribution <i>(Indirect)</i> Capital investment enables businesses to scale their reach</p>	<ul style="list-style-type: none"> # of solutions that have scaled to 1-5 countries # of solutions that have scaled to 6-10 countries # of solutions that have scaled to 11+ countries
<p>VF Contribution VF and OOI facilitate OS technology and/or investees into UNICEF programme countries through pilots</p>	<p>THEMATIC INDICATORS</p> <ul style="list-style-type: none"> # of CO countries that solutions are active in (outside country of origin) # of solutions piloted/adopted by COs/Hubs per thematic area # of solutions piloted/adopted by COs/Hubs that address gender # of solutions piloted/adopted by COs/Hubs that address disability issues # of solutions piloted/adopted by COs/Hubs that address humanitarian challenges



Evidence Generation

Generate evidence and learning to demonstrate the relevance and efficacy of Open Source tech solutions and digital public goods for improving the lives of children and building the knowledge of disruptive technologies and their potential for UNICEF

OUTCOME 5

VF Contribution

VF provides mentorship, technical support and additional funding to support evidence generation

5.1 A robust evidence base that demonstrates the effectiveness of Venture Fund solutions to improve the lives of children

VF Contribution

VF provides additional resources to support the production of learning materials and opportunities.

VF Contribution

VF provides additional resources to support the production of learning materials and opportunities.

INDICATORS

of investments that at the end of investment period can show level 3 or higher of evidence
 # of solutions with demonstrable evidence that the solution and/or technology has the potential to create positive outcomes for children

of case studies or evidence briefs produced that demonstrate learnings around VF investments
 # of learning sessions or events held (external) to disseminate learnings on VF's portfolio
 # of learning sessions or meetings held (internal) to disseminate learnings on VF's portfolio
 # of solutions designed to address Global Innovation Portfolio problem statements
 # of UNICEF Venture Fund investments selected for inclusion in one or more of UNICEF's Global Innovation Portfolios

THEMATIC INDICATORS

of investments that can show level 3 or higher of evidence per thematic area

Pathfinder Countries

Pathfinder Countries

Country	Focus Area	Approach	Activities
Kazakhstan CO	Learning and Accessibility	<ul style="list-style-type: none"> Working with government innovation hub (accelerator) to identify Digital Public Goods Conducting a needs assessment 	Focusing on strengthening a public private partnership between UNICEF, the Ministry of Education and Astana Hub to support locally developed DPGs. The CO had conducted a needs assessment in identifying gaps and needs that can be solved with DPGs, including identifying which solutions are already in place or be developed and placed as a DPG, and curating a database of information that can be leveraged to close the gaps. Also, the CO analysed government capabilities to create, adopt, procure, and maintain Open Source software for the government. This needs assessment then supported a continuous conversation on how the government can utilize DPG solutions. The CO has also hosted webinars on DPGs, which helped source further solutions, such as Accessible Kazakhstan, which has been vetted and is now listed as a DPG in the Registry.
Kyrgyzstan CO	Health	<ul style="list-style-type: none"> Working with Ministry of Health Identified an existing solution to submit as a Digital Public Good 	Benefitting from the programme to develop normative and practical knowledge for the digitalization of healthcare. Designed and deployed an Open Source telemedicine platform Intelhealth as part of Kyrgyzstan's Primary Health Care System. Trained health administrators and end-users (doctors) to efficiently use the tool.
Uzbekistan CO	Learning	<ul style="list-style-type: none"> Needs assessment and gap analysis Localizing content Working with Ministry of Education and the Innovation, Technology and Strategy Center 	Digitalization of UPSHIFT – adapting UNISOLVE platform to be registered as a DPG in 2023, in collaboration with the Innovation, Technology and Strategy Center under the Ministry of Public Education. Adaptation of UNICEF India CO's National School Innovation Challenge digital platform to the local context and language in Uzbekistan. Development of new modules and security assessment for existing Social Protection MIS (Single Registry). Enhancing education data management systems.

The Philippines CO	Health and Financial Inclusion	<ul style="list-style-type: none"> • Landscape Analysis of Solutions and Stakeholders in the ecosystem • Identified and submitted a local solution into the DPG registry • - Ran an open-source accelerator program focused on Fintech 	<p>Enhancing project AEDES (Data Science for Dengue virus prediction) to help prioritize interventions and resource allocation using database Management and Automated Data Ingest for Search Trends, Climate, Satellite, and Health Data, which entails continuous research on alternate global open data sources. As a result, registering AEDES as a DPG. Working closely with universities and academia on advocating about DPGs, including webinars and teaching an elective at a local university.</p>
Vietnam CO	Learning	<ul style="list-style-type: none"> • Worked with the Ministry of Education • Implemented existing Digital Public Good within the Registry • Identified and supported a solution to be submitted into the Registry 	<p>Supporting negotiation with the Ministry of Education and Training who agreed to localize two existing DPGs: VRapeutic and Global Digital Library (GDL). Through GDL, Vietnam provides access to 160 free, Open Source, high-quality, digital early grade reading books in Vietnamese, 8 “underserved” Ethnic Minority languages, and a sign language accessible to every child in the country. Vietnam has also invested in the contextualization of a “therapeutic virtual reality” solution by one of UNICEF’s Venture Fund graduates (VRapeutic), tailored to improve the cognitive and social skills of all 6-12-year-old Vietnamese children with ADHD and/or autism. CO supported translation of the VR content into Vietnamese, trained therapists, and selected children for a VRapeutic pilot.</p>
Jordan CO	Employability	<ul style="list-style-type: none"> • Conducted a landscape analysis of potential Digital Public Goods • Partnered with a startup accelerator to identify and support open source and submit Digital Public Good solutions into the registry 	<p>Conducting a user testing interview for the DPG Operational Toolkit with the Ministry of Digital Economy and entrepreneurship, and supporting negotiations with Dot.Jordan to open source their impact jobs platform. Launching a partnership with Jordan Start Accelerator to support 5 startups developing potential DPG solutions to be submitted into the Registry.</p>

Sierra Leone CO	G2P Payment, government services and COVID-19	<ul style="list-style-type: none"> Conducted a landscape analysis from end-users on their knowledge of DPGs using RapidPro Working with DSTI on building capacity to deploy further Digital Public Goods Implemented Digital Public Goods from the Registry 	Supporting three DPGs (OpenG2P, Primero, MOSIP) developed or adopted by Department of Science, Technology and Innovation (DSTI). Working on sensitization of DPG definitions, standards and activities amongst government agencies, startups, universities and end-users through hackathons, workshops and a quarterly DPG connect event in partnership with the Digital Learning Hub. In 2023, the CO will also focus on building capacity within DSTI and stakeholders by the recently formed DPG Technical Working group consisting of ministerial representatives, academia, and startup community leads.
Ghana	Learning, COVID-19 and Financial Services	<ul style="list-style-type: none"> Identified startup solutions to become a Digital Public Good through UNICEF Startup Lab in Accra Advocated for Digital Public Goods through Open Source communities Linked with academia to advocate for the Digital Public Good concept 	Engaging local startup ecosystem through MEST Accelerator program and UNICEF Startup Lab located in Accra. Partnering with the local Software Freedom Day activities to promote the DPG concept. Supporting development and registry of 4 DPGs (BisaHealth, EduNOSS, PrepTime, Trimester Save). Developing a suite of trainings for social impact entrepreneurs. Engaging AITI-KACE Institute in promoting DPGs.
Niger	Learning and Health	<ul style="list-style-type: none"> Partnership with the government agency ANSI (Agence Nationale pour la société de l'information) Creation of open content to be registered as a Digital Public Good in the future (drone training) 	Supporting the establishment of an African Drone and Data Academy (ADDA) in Niger, in collaboration with ANSI, to develop an additional module for ADDA Niger and translate the existing content modules. These courses would help create a trained drone operations workforce in support of public health initiatives.
OECS	Learning	<ul style="list-style-type: none"> Identified solution and registered it as a Digital Public Good Implemented existing Digital Public Good with the Ministry of Education 	Supporting registration of a local DPG, Notesmaster, and its implementation in three countries in partnership with the Ministry of Education. This was particularly timely, as schools moved to online learning during COVID-19, in which Notesmaster provided open, distance e-learning for teachers and students. Implementing and localizing an existing DPG, GDL.

Results from new and graduated companies

Results from new and graduated Venture Fund Companies

Seed Stage Investments (11)

Company	Technology	Brief Description and Results to date
Child Online Safety Cohort		
Talk2U (Brazil) Graduated 2023	Data Science + AI DPG status: <ul style="list-style-type: none"> Active 	Launched the “Como Se Eu Fosse” WhatsApp chatbot to combat online hate speech <ul style="list-style-type: none"> Reaching over 500 participants 85% of users found the experience to be valuable to learn about hate speech and deal with its impact. Via their additional projects, reached over 2 million beneficiaries to date across 8 conversational journeys (example topics include, Mental Health, HIV, and more)
Tilli (Sri Lanka) Graduated: 2023	Data Science + AI DPG Status: Pending submission	Developed an AI-powered social-emotional learning tool with 80% completion rate <ul style="list-style-type: none"> Over 90% of learners reporting successful integration of learnings with everyday problem solving 5,000+ learners have benefited from the solution to date Collaboration with Save the Children Sri Lanka reached over 3,000 families
Data Science + AI Cohort		
Afrilearn (Nigeria) Graduating AUG 2023	Data Science + AI DPG Status: Pending submission	AI-powered personalized learning platform that aims to create high-quality, affordable and accessible education for African students via animated and curriculum-relevant video lessons, class notes, practice tests, live classes, and a personalized learning dashboard. <ul style="list-style-type: none"> Built a personalized recommender system and integrating gamification to increase learner engagement towards optimizing improved learning outcomes and growth. Currently used in 25 states across Nigeria. Overall, serving 20,000 direct users, with over 400,000 indirect beneficiaries including parents, teachers, and schools across Africa.

<p>AQAI (India)</p> <p>Graduating SEP 2023</p>	<p>Data Science + AI</p> <p>DPG Status: Pending submission</p>	<p>Machine learning powered predictive model for monitoring air quality.</p> <ul style="list-style-type: none"> • Developed the 1km x 1km Open Source PM2.5 (Particulate Matter) API. • Collaborated with OpenAQ on global Particulate Matter data, resulting in a high-fidelity Air Quality Model. • Won NASA Data Visualization Award (AGU 2022) and OpenAI Climate Hackathon 2022. • Collaborating with University of Waterloo to understand the health impact of air quality in Mongolia.
<p>Bookbot (Indonesia)</p> <p>Graduated 2023</p>	<p>Data Science + AI</p> <p>DPG Status: Pending submission</p>	<p>An innovative reading program designed for early primary school readers,</p> <ul style="list-style-type: none"> • Includes a vast library of 2,500+ levelled books in Bahasa and in English and a reading tutor within an app that utilizes speech recognition technology. Works offline and in low bandwidth areas. • Collaborated with Indonesia Ministry of Education and Culture and INOVASI to train over 415 teachers in digital literacy skills. • The app has been downloaded more than 32,000 times. Early data from testing shows Bookbot achieved the lowest error-rate speech recognition for Indonesian children, working on-device and offline. Additionally, children improve reading fluency on average by 2X in a year.
<p>Cirroltyix (Philippines)</p> <p>Graduating AUG 2023</p>	<p>Data Science + AI</p> <p>DPG Status: • Active</p>	<p>Developed a platform for dengue prediction using climate and health data for epidemic management. Their solution <u>PROJECT AEDES</u> has been renewed as a digital public good.</p> <ul style="list-style-type: none"> • Building a risk framework to be used in multiple scenarios (i.e. climate, disaster, political, ESG). • Collaborating with the Philippine Paediatric Society – Southwestern Mindanao Chapter to implement clinical interventions based on prediction models.
<p>Eyebou (UAE)</p> <p>Graduating: NOV 2023</p>	<p>Data Science + AI</p> <p>DPG Status: Pending submission</p>	<p>An AI tool for virtual eye exams to detect vision disorders in children. The solution is optimized for low-resource environments and limited connectivity and can be accessed using a mobile device.</p> <ul style="list-style-type: none"> • Conducted a pilot with SOS Children's Villages in Columbia to screen the eyes of 2500 children who would have otherwise not had access to eyecare. Of the children screened, 60% had never seen an optometrist and issues from visual acuity to strabismus were detected in over 45% of the children. • Achieved high ease-of-use rating from users in feedback sessions.

Jobzi (Brazil) Graduated 2023	Data Science + AI DPG Status: Application Submitted	AI and data intelligence to predict the impact of school connectivity on labour and education outcomes. <ul style="list-style-type: none"> • With input from UNICEF GIGA, built Machine Learning models available at unicef.jobzi.com to predict connectivity and employment in schools • Currently serves 210,000 B2C users and 50 corporate clients
Neural Labs Africa (Kenya) Graduated 2023	Data Science + AI DPG Status: Pending submission	A medical technology company using AI to transform medical imaging diagnosis. <ul style="list-style-type: none"> • Developed an algorithm that uses deep learning and computer vision to identify diseases in real time, named NeuralSight™, which can identify over 20 respiratory diseases and pathologies. • Partnered with 5 hospitals in Kenya and Cameroon to conduct user tests to evaluate the solution's efficacy. • Data collection: Collected over 10,000 images for training and screened over 5,000 images. • Accepted to Vilgro Africa incubator for emerging healthcare business in Africa.
Om3ga Solutions LLC (Serbia) Graduated 2023	Data Science + AI DPG Status: Pending submission	Built Daktilograf, a highly accurate speech-to-text (STT) and text-to-speech solution (TTS) for Slavic languages. <ul style="list-style-type: none"> • The solution offers fast and accurate transcription of unlimited numbers of words via online platform, mobile app, and on-premises solution • Product has been adapted for offline settings and an AI chatbot was created. This is the first and largest open public TTS and STT dataset for machine learning in the region • Tested solution in elementary school classroom in Montenegro to gather feedback from students and teachers.
Portal Telemedicina (Brazil) Graduating OCT 2023	Data Science + AI DPG Status: Pending submission	A population health management platform using AI to detect anomalies and prioritize emergencies. <ul style="list-style-type: none"> • Currently working across Brazil and Africa, with operations in over 900 cities and 32 million patients already impacted by the platform • Partnering with City of Taruma, Brazil to integrate Smart Child Development Platform, with a focus on vaccination data. User testing is ongoing and a user-friendly dashboard interface has been developed

Results from new and graduated Venture Fund Companies

Follow-on Investments (12)

Company	Technology	Brief Description and Results to date
Bridge 1 Cohort (2021-1022)		
Atix Labs (Argentina) Graduated 2023	Blockchain DPG status: • Active	Developed a global social platform that connects Small and Medium Enterprises (SMEs) with funders in different locations facilitating investments and creating a transparent investment monitoring and evaluation process <ul style="list-style-type: none"> • Acquired by Globant
Dymaxion Labs (Argentina) Graduated 2023	Drones DPG status: • Active	Solution surveys large areas using AI-powered geospatial analytics to better inform public policies and decision makers. Developed the Dymaxion Labs Toolkit (DLT) — an evolution of Open Source libraries for running machine learning models on satellite imagery. It simplifies geospatial library installation and infrastructure scaling. It empowers organizations to process data, train models, and apply them at scale in agriculture and urban development. <ul style="list-style-type: none"> • DLT was deployed in 4 case studies (1,750,000 km2) in Honduras and Columbia • Pilot for Buenos Aires City Government project for mapping green areas using the DLT toolkit not just for deploying but also for training the models (600 km2) . Trained 200 people in 4 countries in Latin America • Acquired by GDM during investment period
Pixframe (Mexico) Graduated 2023	Data Science + AI DPG status: • Active	Main product Towi is a platform based in neuroscience that helps children develop their most important skills for learning through video games. During the investment period, the team developed 3 new mini-games and upgraded AI models for better prediction of learning difficulties. <ul style="list-style-type: none"> • Conducted large-scale pilots 1,000+ users to assess behaviour and predict learning difficulties. The team is now exploring correlations between literacy ad AI models. The results are being compiled for ADD severity classification status. • Selected as preferred provider for Guatemala Ministry of Education's Strategic Plan. The team is customizing solutions for offline use, targeting 1,500,000 students. They will provide comprehensive teacher training and ongoing support.

<p>Somleng (Cambodia)</p> <p>Graduated 2023</p>	<p>Interactive Voice Response</p> <p>DPG status: • Active</p>	<p>Developed Open Source telco-as-a-service (TaaS) and Cloud-communications-as-a-service (CPaaS). During the funding period, Somleng conducted two pilots in <u>Guatemala</u> and Zambia with UNICEF and People in Need, respectively. Currently powers the Royal <u>Cambodian</u> Government's national early warning system.</p> <ul style="list-style-type: none"> Expanded its market into Mexico and Canada by introducing TaaS for telcos. One new customer in Mexico is using this new functionality to continue supporting UNICEF Guatemala with their prevention of childhood malnutrition pilot in 2023. Introduced a carrier by-pass feature, enabling organizations to use Somleng without having to partner with a local carrier. This functionality unlocked a new market in <u>Nepal</u> with Rahat (another UNICEF Venture Fund company), who are using it as part of their beneficiary management system. UNICEF funding helped Somleng unlock additional revenue sources and five new customers in new markets, resulting in 425k new beneficiaries and 1.15M new interactions
<p>StaTwig (India)</p> <p>Graduated 2023</p>	<p>Blockchain</p> <p>DPG status: • Active</p>	<p>StaTwig's decentralized supply chain management platform such as VaccineLedger, leverages blockchain technology, Internet of Things (IoT) and Artificial Technology and Machine Learning to capture data for every single vial of vaccine in the supply chains from manufacturer to beneficiary.</p> <ul style="list-style-type: none"> StaTwig has deployed Vaccineledger in 27 projects. StaTwig has tracked over 13.5M doses of vaccines, 22,5M kgs of rice, and 3 million recycled bottles through their platform. Completed LACChain Integration VaccineLedger was deployed in Costa Rica to track Covid-19 vaccines and other pharmaceutical products, on-boarded almost 1000+ locations which creates approximately 70% market visibility in Costa Rica. Additionally, released the VaccineLedger app in Spanish and regional languages, making it accessible on the Play Store and App Store.
<p>Weni (Brazil)</p> <p>Graduated 2023</p>	<p>Data Science + AI</p> <p>DPG status: • Active</p>	<p>Solution uses AI to generate conversations that flow more naturally, creating a more human-like experience. This is achieved through a low-code, all-in-one communication platform built on RapidPro's capabilities that allows teams to structure complex intelligent chatbots.</p> <ul style="list-style-type: none"> Developed Crypto, a chatbot to help students in their learning journey. Crypto uses modern language and NLP concepts to get closer to the student and increase their engagement. Students who used crypto scored an average of 3 points higher than students who did not. More than 180 languages supported; 40+ projects initiated across all continents (including over 25 countries across all 7 UNICEF regions); and over 10 million people impacted. Currently provides approximately 29% of U-Report digital services for UNICEF globally.

Bridge 2 Cohort (2022-2023)**Angaza Elimu**
(Kenya)Graduated
2023

Data Science + AI

DPG Status:
Application Submitted

Developed a digital learning platform for adaptive assessment, and tailored support which works offline in regions with low connectivity.

- With UNICEF funding, Angaza revamped their e-learning platform, built a student adaptation engine, and established an IoT training school.
- Conducted pilot in nearly 200 schools, focusing on teacher training and capacity building.
- Daily active users have grown overall to 43,000
- Awards: ICT Authority 2023 Innovation Award; Mastercard Foundation EdTech Fellowship Programme 2023

Bioverse Labs
(Brazil)Graduating
OCT 2023

Drones

DPG status:
• Active

Solution uses drones and AI to support the sustainability of the Amazonian ecosystem.

- Scaled up its work that provides logistical support to community cooperatives in the Brazilian rainforest. So far, Bioverse has vectored over 9,240 trees, completing machine-learning training; and has 97% accuracy on ML models for detection of the Brazil Nut Tree.
- Receive the FINEP Brazilian Federal Government Startup AI Research and Development Fund grant and was selected as one of seven startups for the AgLaunch365 Program in spring 2023.

**Comunicacion
Aumentativa (aka
OTTA Project)**
(Chile)Graduated
2023

Data Science + AI

DPG status:
• Active

Developing an AI enabled communication assistant for children with speech impairments using AI and pictograms.

- With UNICEF Funding, OTTAA enhanced its solution usability through UI/UX updates; incorporated the power of GPT technology, enabling advanced prediction capabilities and sentence creation within the app; and developed a brand-new algorithm from the ground up, leveraging cutting-edge machine learning techniques
- OTTAA has thus far generated \$275k in revenue; experienced significant user growth to 15,000 monthly active users in LATAM; and conducted over 50+ workshops engaging more than 500 participants
- OTTAA received the Premios Perfil award for potential global impact

Dronfies Labs
(Uruguay)Graduating
OCT 2023

Drones

DPG status:

- Active

PortableUTM solution provides support to drone operations during emergency situations such as natural disasters, compatible with a large variety of consumer drones.

- With UNICEF Funding, Dronfies is extending and refining their UTM solution for drone delivery and emergency response and recovery. The team will conduct a four-month pilot to deliver supplies (blood supplies, medicine, breastmilk) in rural Tacuarembó, Uruguay between the central hospital and clinics.
- The team is FAA compliant and has received civil aviation authorization in Uruguay.
- To date, Dronfies has conducted 3000+ flights with no accidents; have reported they have registered nearly 500 official operations in the Uruguayan UTM implementation this year, with a projected growth of 2500 operations by the year-end marking a new milestone for the company; and have achieved over 10,000 registered operations across all of their environments.

Simple Maps -
Formerly known as
Rentadrone
(Chile)Graduated
2023

Drones

DPG status:

- Active

Develops solutions using machine learning, thermal, and multispectral imagery to detect, classify, and organise errors and damaged modules in solar power plants, with the goal of improving energy efficiency and performance of solar farms.

- Significant milestone —successfully conducted third-party drone operations in Australia, Chile, and Spain simultaneously.
- Confirmed its first Photovoltaic Solar Farm in Mexico, known as Los Cuervos Solar Park, which had a power capacity of 280 MW.
- Rentadrone also enhanced its automation algorithm, enabling the company to process 700 MW per month, compared to its previous capacity of 250 MW.

Acceleration Funding Cohort (2022-2023)**Thinking
Machines**
(Philippines)Graduating
OCT 2023

Data Science + AI

DPG Status:
Application Submitted

Working alongside UNICEF's East Asia and Pacific Regional Office to develop the foundation for ten times more AI research in Southeast Asia through the AI4D Research Bank program. Based on the principles of open source and open-methods, this partnership has successfully produced three key data products which will be integrated for the AI4D Research Bank.

- Trained and developed Open Source poverty estimation models for Southeast Asia; conducted air quality research and published model benchmarks for air quality monitoring in Thailand; and integrated the use of GeoWrangler to speed up geospatial data process in EAPRO program operations.
- Currently working with 24 B2B clients, including UNICEF through its acceptance as a holder of a Long-Term Agreement.