

IMPACTFUL INTERNET

Annual Report | 2022/23

CONTENTS

Introduction	
About Jangala	5
Impact Highlights	8
Jangala's Year	
High Quality Wi-Fi	
Our Impact	
Looking Ahead	25
Finances	27
Thank You and Acknowledgements	

INTRODUCTION

Welcome to Jangala's Annual Report for the year 2022/23, a year that marks Jangala's fifth birthday and a remarkable journey of growth and impact. It's heartening to see how far we've come, from a promising idea to a dynamic organisation making a tangible difference in the world. In the past 12 months, Jangala has experienced a transformative period of change and progress. One of the most exciting developments we've seen is the tremendous expansion of our Big Box projects and further deployments of Get Box in the UK. These developments have led to Jangala featuring in a landmark report by the UK's Data Poverty Lab as a recommended "scaling solution for people who need internet access the most". We've witnessed our devices being deployed in diverse and inspiring contexts, delivering connectivity where it's needed most. The impact we've witnessed has been truly remarkable.

We couldn't have achieved this without the support of our funders, both big and small. A heartfelt thank you to Lenovo, Arm, Virgin Media O2, Cuckoo and all our partners for believing in our vision and making it a reality.

Our people deliver our projects, products and underlying technology. This year we've doubled the size of our team, bringing together an extraordinary group of talented individuals who are dedicated to our mission. I want to acknowledge the outstanding work of the entire Jangala team but also want to give special mention to the leadership of Anna, Nils, Samson and Rich. Their shared commitment, creativity and resourcefulness have been instrumental in bringing our projects to life and propelling us forward.

It's important to remember though that the greatest challenges and rewards still lie ahead. In the next year, following three prototype versions, we keenly anticipate the launch of Big Box V1 – a milestone that promises to generate even greater impact and reach. Additionally, the establishment of our trading subsidiary opens up exciting opportunities with major organisations for collaboration and scale.

We remain firmly committed to our mission of creating a connected and equitable world, fuelled by the belief that open and universally available technology can be a powerful force for good.

Thank you to everyone who has contributed to Jangala's journey so far. Together we will continue to strive for innovation, collaboration and – above all – making a real and tangible difference.

Kip Meek Chair | Board of Trustees



WHO WE ARE

Jangala is a humanitarian technology charity that works to ensure people are digitally included, no matter where they are in the world. Since 2015 we have provided Wi-Fi to unconnected schools, clinics, refugee camps and disaster response projects connecting over 70,000 people across 36 countries. This work has been built in collaboration with a wide range of partners – from small NGOs to major organisations like UNICEF and the International Organization for Migration (IOM) to individual schools and public bodies such as an NHS trust.





OUR VISION

Our vision is to make universally accessible technologies that help people build better futures.

OUR MISSION

Our mission is to collaborate widely to ensure every school, clinic and community resilience project worldwide has internet access so that societies everywhere can meet the pressing challenges of today and the uncertainties of tomorrow.

LOOKING AHEAD

We are aiming to deploy thousands of Get Boxes and over 130 Big Boxes in 2023/24 connecting over 100,000 more people, as well as making substantial updates to our technology.

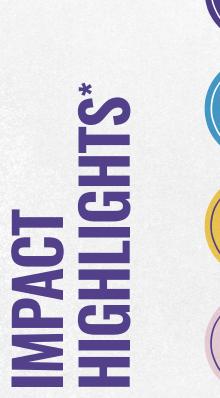
Rescue Wing Kakuma Refugee Camp, Kenya

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Big Box deployment St Martins School, Kenya

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98,396

PEOPLE IMPACTED BY IMPROVED SERVICES

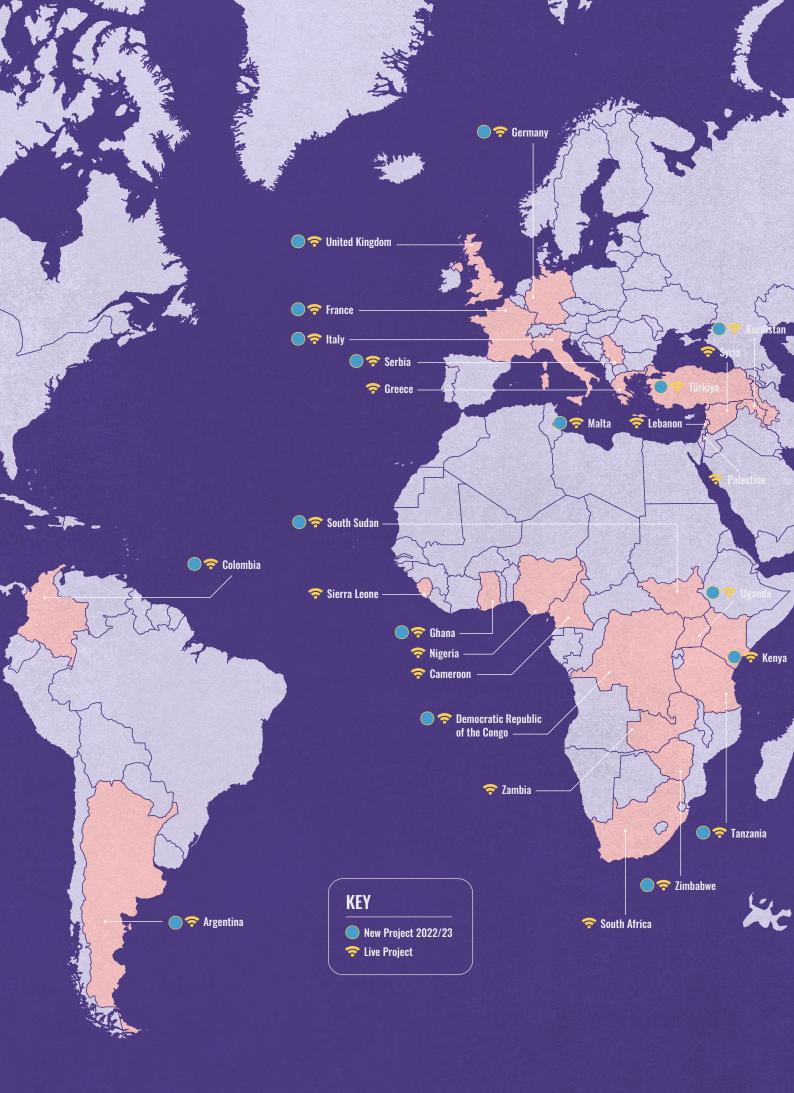
52 BIG BOXES DELIVERED



67 Get boxes delivered

*2022/23





穼 Nepal

LIVE PROJECTS:

🛜 India

Argentina, Cameroon, Colombia, Democratic Republic of the Congo, France, Germany, Ghana, Greece, India, Italy, Kenya, Kurdistan, Lebanon, Malta, Nepal, Nigeria, Palestine, Serbia, Sierra Leone, South Africa, South Sudan, Syria, Tanzania, Türkiye, Uganda, United Kingdom, Zambia, Zimbabwe

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GROWING JANGALA'S CAPACITY & CAPABILITY

2022/23 has seen an enormous growth in Jangala's capabilities. We've grown from a team of eight people to 14 which has brought extra capacity to our organisation and services. New colleagues have joined our Projects, Software Engineering and Fundraising and Communications teams. Each new colleague has hugely increased our capacity to take on ambitious and exciting work – much of which is covered in this report. Jangala's work over the past five years has resulted in systems that are working well in the field:

- Our final prototype of Big Box is proving to be robust and capable – it is able to deliver connectivity in extreme conditions (vital for our newly set up Emergency Response programme)
- Our software infrastructure now has the capacity to support tens of thousands of active systems, paving the way for future growth
- We've made great strides with the logistics capability needed to deliver our products to some of the most challenging parts of the world

This year we've witnessed a significant increase in both our monetary and nonmonetary resources, providing us with an excellent foundation for growth. Our income has tripled compared to the previous year, thanks to the invaluable support of our sponsors including the Lenovo Foundation, Arm, Cuckoo and Virgin Media O2. This enhanced funding enabled us to expand our operations, R&D and potential for impact.

We have also received greater amounts of pro bono "in kind" support. Herbert Smith Freehills, who have supported our work since 2017, continue to provide us with their invaluable legal assistance. Their support has been instrumental in our success thus far.

We were very proud to win the Clifford Chance Sustainable Development Goals Award in late 2022. This is an important milestone for Jangala. In addition to a grant of £50,000, we receive 500 hours of legal support and advice.

We will be working with Clifford Chance to tackle issues critical to enabling our future sustainable growth. These areas include development of a trading subsidiary, a framework for intellectual property and licensing and navigating regulatory issues spanning wireless telegraphy, governance, data protection and GDPR.

WE DELIVERED MORE PROJECTS IN 2022/23 THAN THE PAST FIVE YEARS COMBINED.

The influx of resources – both in terms of financial support and pro bono assistance – sets the stage for Jangala's future success. We remain grateful to all our sponsors and pro bono partners whose continued dedication and belief in our mission have been essential to our achievements so far.

Thanks to the increased capacity highlighted here, Jangala was able to deliver more projects in 2022/23 than in any previous period. Amazingly, we delivered more projects in 2022/23 than we did in the collective total of the past five years.

Geographically we have been able to expand our work into new countries, including Colombia and India. We've also been able to take on challenging new projects such as the Kpando High School in Ghana – which sees some 3,000 students walk through its gates every day – and a shared accommodation in Paris which is home to over 800 refugees and asylum seekers.

We've also been able to rapidly onboard project partners, carry out our due diligence and deliver emergency Big Boxes within 48 hours. All of this work was essential to the launch of our Emergency Response programme which has supported the delivery of Wi-Fi in global humanitarian crises, including connecting first responders in Türkiye in the immediate aftermath of the Türkiye/ Syria/ Lebanon earthquake.



DELIVERING HIGH QUALITY WI-FI

As an organisation we aim to deliver high quality and reliable internet access in a way that is simple and efficient. This North Star guides everything we do; from our product design to our site assessment, due diligence and set-up approach.

By delivering reliable Wi-Fi to those who need it most, we aim to lower the barriers to connectivity for projects around the world doing critical and urgent humanitarian and education delivery. We prioritise user experience of the Wi-Fi and our approach to project design is partner-led.

Our delivery process aims to understand the connectivity requirements of each of our respective partners – how many people need to get online and for what type of activity, for instance. We then carry out a site assessment to determine the practicalities of the internet delivery in partner specific circumstances such as the dimensions of buildings, signal strength and any other environmental factors. Additionally we seek to understand which devices are needed to make a project successful and, where communities don't have enough to make the most of the Wi-Fi, we can offer laptops and tablets through our partner the Lenovo Foundation.

Once we are satisfied that Jangala's solution is right for the project partner, we dispatch our technology and supporting equipment – such as antennas to improve the signal, access points to extend the networks and batteries for use on-the-go. Then we support the project partner to set-up, test and manage their Wi-Fi through WhatsApp. This model allows us to deliver secure, expandable Wi-Fi with just a few hours of time and in as little as a few days.

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HELPING PEOPLE OUT OF POVERITY AND MORE CHILDREN INTO SCHOOL

At Jangala, we understand that access to quality internet is not just a prerequisite for efficient service delivery – but an essential infrastructure. In fact it's an infrastructure that can yield many positive externalities, empowering people and their communities.

Jangala's projects have delivered quality Wi-Fi to 40,703 people and impacted a population of 98,396 worldwide. On top of this, we've been able to share the real and nuanced impact that connectivity has had on people's lives through first-hand stories from our project partners. Jangala Annual Report 2022/23

NEW EDUCATION OPPORTUNITIES IN THE DRC

THERE IS NO DOUBT THAT WITHOUT [JANGALA'S] IMMEASURABLE SUPPORT, THESE YOUNG PEOPLE WOULD FIND IT DIFFICULT TO KNOW WHAT COMPUTERS AND THE INTERNET ARE. THEREFORE, THEY WOULD REMAIN IN THIS CYCLE OF POVERTY WHICH OVERWHELMS THOUSANDS OF YOUNG PEOPLE ALL OVER THE WORLD AND IN THE DRC.

Fadhili Kyabira Coordinator for CEAFPD, DRC In the Democratic Republic of the Congo (DRC), Big Box is helping to provide new education opportunities to young people at risk of joining local militia through our partner CEAFPD Education Centre (Centre d'Encadrement et d'Appui en Faveur des Personnes Démunies).

Following CEAFPD's partnership with Jangala, Fadhili has been able to attract funds and local government support to build a further computer lab, expanding the centre's education programmes to more young people in the area. Katongo Computer Lab is now under construction and will be supported by laptops and tablets from the Lenovo Foundation.

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Jangala Annual Report 2022/23

Our Impact | 17

INCREASING ENROLMENT IN UGANDA

THE NUMBER OF STUDENTS AT THE HIGH SCHOOL HAS INCREASED THIS TERM DUE TO THE FACT THAT WE HAVE THE INTERNET. THE ORDINARY LEVEL CURRICULUM HAS BEEN CHANGED HERE IN UGANDA TO A MORE PRACTICAL AND RESEARCH-BASED ONE. THIS MEANS MORE USAGE OF THE INTERNET. HAVING THE INTERNET AVAILABLE AT THE SCHOOL THROUGH THE USE OF THE JANGALA BOX HAS MADE THIS VERY EASY FOR OUR STUDENTS. WE ARE IN A HARD-TO-REACH AREA BUT WITH THIS BOX OUR STUDENTS HAVE NOT MISSED ANYTHING, AS THEY HAVE ACCESS TO THE INTERNET ANYTIME.

Joshua Araali Nyakairu Programmes Lead

The Good Samaritan High School in Uganda supports 1,500 students across its primary and secondary schools and has connected its computer lab to Wi-Fi using Big Box. As well as providing online lessons to the students as a critical part of their curriculum the school has actually been able to enrol more students thanks to the Wi-Fi.



BOOSTING NETWORK COVERAGE IN GHANA

BIG BOX HAS TREMENDOUSLY HELPED BOTH THE STUDENTS AND STAFF. [WE ARE] CURRENTLY UPLOADING DATA TO THE MINISTRY OF EDUCATION. IT SAVES THE TIME AND COST OF OTHERWISE EMBARKING ON A 4 TO 5 HRS DRIVE TO ACCRA TO SUBMIT HEAVY PACKETS OF DATA.

Nana Otibribi III Kpando High School, Ghana Kpando High School in Ghana supports over 3,000 students across its campus. Kpando High offers free, high-quality education (funded by non-profit organisation EVA) to pupils from disadvantaged backgrounds in the Kpando Region.

When the school approached Jangala in 2022 their library was equipped with 60 computers but without internet access they could not make the best use of these devices. As well as providing a Big Box, to connect the computer lab, the Jangala team provided remote technical support to Kpando School – helping them build a network to cover all of the buildings in the school and the sports fields for both students and teachers to use.

Jangala's partnership with Kpando School is an excellent demonstration of the capacity of Big Box and its ability to act as a central hub for a wide network. Big Box is able to use its routing power and access points (also provided by Jangala) to provide coverage to a campus of 10,000 square feet.

BRINGING DIGITAL LITERACY TO CHILDREN IN REMOTE AREAS OF INDIA

ALIG Educational and Welfare Society is an NGO in India that aims to bring knowledge-based sustainable programmes in education, health and skills to people in Jharkhand and Uttar Pradesh. Last year ALIG launched a digital literacy programme, alongside its many other programmes, for school children in the Jharkhand region.



To ensure that over 3,000 children in remote areas are able to benefit annually, the programme is delivered using a mobile digital literacy van. This van moves from school to school, helping ALIG to reach remote areas. Jangala has partnered with ALIG to provide a Big Box which provides reliable internet for the ten laptops and five mobile phones in ALIG's digital literacy van.

Jangala has also provided ALIG with Big Boxes to provide internet access to a Women's Skills Centre and a school in Jharkhand. You can read more about these projects and our Managing Director Rich Thanki's trip to ALIG projects in December 2022 <u>here</u>.

The internet is regarded as one of humanity's greatest gifts and in the last 10 to 15 years it has spread rapidly throughout the globe. Our government school students and girls of our skill centres are benefited with this gift with the rock-solid support of JANGALA. JANGALA is providing wifi connections in government schools and skill centres which supports 1,800-2,000 beneficiaries. These underprivileged students are blessed with this facility which helps them in several ways.

The girls of skill centres and government school students are provided with JANGALA Wifi connections and can search for any relevant information required, helps in online education and distance learning, enhancing their communication and connectivity with different people and look forward to their careers. The underprivileged girls of skill centres are saving their money also as they getting free wifi connections for using internet... ...THANKS FOR SUPPORTING OUR UNDERPRIVILEGED GIRLS AND STUDENTS FOR AIDING THEM WITH FREE WI-FI CONNECTIONS FOR CONTINUING THEIR STUDIES WITHOUT ANY HINDRANCE AND PROVIDE THEM WITH MORE AND MORE BENEFITS.

Arshad Kauser Executive Director ALIG, India



Our partnership with ALIG's digital literacy van is an excellent demonstration of Big Box's portability. Powered by a car battery and using a mobile SIM card as backhaul, ALIG's team can drive around the entire region with reliable and quality internet.

SUPPORTING EARTHQUAKE SEARCH AND RESCUE TEAMS TO SAVE MORE LIVES

In the early hours of February 6th 2023 a magnitude 7.8 earthquake hit southern Türkiye and north-west Syria, with another magnitude 7.5 earthquake just hours later. An estimated 60,000 people died across both countries; a further <u>100,000 were injured</u> and hundreds of thousands of people were left homeless.

In the immediate aftermath, humanitarians were galvanised by the UN to help those affected. UK search-and-rescue organisation Serve On was one such team. They took two Big Boxes, funded by Virgin Media O2, to Türkiye to enable them to connect to Wi-Fi. Serve On's International Response Team are experts in light search-and-rescue (SAR) and carry out critical life-saving work to rescue people from destruction caused by natural disasters.

Jangala got in touch with Serve On to see how we could help. Barely two days after the earthquake, two members of the Serve On team visited Jangala's offices to collect two Big Boxes and receive in-person training before catching their flight to Türkiye.

On arrival in Türkiye, the Serve On team immediately set up a Big Box in the UN Reception and Departure Centre at Adana Airport to provide fellow emergency responders with connectivity. Quantitative data, collected via our remote monitoring capabilities, showed that 80 people used this Wi-Fi in a two-hour window for intense coordination activities.

The Serve On team then took the Big Boxes to Adiyaman where they conducted their searchand-rescue (SAR) work. They set up one Big Box at their base of operations, enabling 30 people to get online over the course of three days. Some of these people were members of other SAR teams whilst others were displaced individuals in nearby temporary shelters. BY SETTING UP THE SYSTEM, ARRIVING TEAMS HAD THE POSSIBILITY TO GET ONLINE – WHICH MADE OUR JOB OF COORDINATING THE INCOMING TEAMS SO MUCH EASIER AND EFFICIENT... [IT'S] SUCH A GOOD DEVICE TO SUPPORT THE HUMANITARIAN COMMUNITY AND ALSO THE AFFECTED POPULATION.

Holger Sommer

International Disaster Response Germany

Since returning, Serve On have participated in a feedback session to provide useful insights on how Jangala can develop our Emergency Response deployments in the future. The team will keep two Big Boxes at their UK base to be used in future deployments and training exercises, both in the UK and abroad.

UNITED NATIONS ECEPTION/DEPARTURE CENTRE

Serve On Adana Airport, Türkiye

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MAKING LIFE EASIER FOR WOMEN AND CHILDREN IN EMERGENCY ACCOMMODATION

In 2021 Jangala partnered with Riverside Community Big Local to provide Wi-Fi to emergency housing for women and children in Essex. The accommodation can support 10 families at any one time, so we sent four Get Boxes to distribute Wi-Fi throughout the entire property using only a single SIM card between them.

Our Impact | 24

WOMEN IN THE SHELTER CAN ACCESS EMPLOYMENT AND/ OR TRAINING OPPORTUNITIES AND KEEP IN TOUCH WITH LOVED ONES.

Thanks to Jangala's Get Boxes, the children are able to keep up with their learning and education. The children are also able to safely participate in online entertainment due to the systems' capabilities that make it easy for the shelter to meet their safeguarding obligations.

Meanwhile, the women in the shelter can access employment and/ or training opportunities and keep in touch with loved ones – both of which are vital at such an incredibly isolating and stressful time. This partnership is an excellent showcase of Get Box's 'daisychain' capabilities, which enable a large network to be created using only one SIM card.

A single Get Box receives data via the SIM card which is beamed to the other Get Boxes on the network, permitting efficient data management and usage for the network administrator.



LOOKING AHEAD

2023/24 promises to be Jangala's most productive and impactful year yet as many strands of our work over the last five years culminate.

Deploying at greater scale

Jangala aims to deploy the final 130 prototypes of Big Box v0.9 to grassroots organisations, major NGOs and through our Emergency Response Programme to connect over 100,000 people to the internet.

These deployments will not only provide much-needed connectivity but also serve as a valuable testbed for refining our software and support services alongside this year's development of Big Box v1.

With the availability of Big Box v1, Jangala will have the capacity to deploy thousands of Big Boxes globally at scale, making a significant impact across various Sustainable Development Goals (SDGs).

Recognising the growing digital divide and the impact of the cost of living crisis here in the UK, Jangala is planning to significantly scale up our Get Box deployments. This programme will specifically target households in the UK facing a lack of connectivity, including those with schoolaged children and adults with critical healthcare needs. By providing internet access through Get Box, Jangala aims to alleviate the challenges faced by individuals and families and empower them with access to essential online resources.

Launching Lock Box pilots

Lock Box holds great potential in advancing Jangala's vision of empowering communities through technology. With 20 prototype deployments planned, Lock Box will be a key focus area for Jangala. This innovative device, powered by containerisation technology, is capable of running multiple services at the network edge; from caching and accelerating internet access to hosting local offline and hybrid applications and even creating community-driven internets. These deployments will serve as crucial milestones in refining Lock Box and demonstrating its potential impact across a variety of settings.

Evolving Jangala's Cloud Platform

Jangala's Cloud Platform plays a pivotal role in supporting all of its devices and services. Over the course of this year the platform will continue to evolve and improve; providing analytics, control and remote management capabilities for Jangala's devices. Additionally, Jangala plans to make the cloud platform available for partner use which will enable other organisations to make use of its capabilities to further bridge the digital divide.

Establishing our trading subsidiary

To ensure the successful delivery of our goals in 2023/24 and beyond, Jangala is focused on strengthening the organisation. A key element this year will be to establish a trading subsidiary. In future years our trading subsidiary will generate income through the commercialisation of Jangala's technologies and expand our ability to work at scale with major NGOs, governments, and development authorities worldwide. To deliver our ambitious goals we will work with partners, make use of our expanded team and hire in key areas of need.

A brighter, more connected future for everyone

In the coming 12 months, Jangala is poised to take significant steps in addressing the digital divide and providing impactful connectivity solutions worldwide. Jangala's plans for 2023/24 are centred around advancing our products, expanding our reach and strengthening the organisation.

Through our commitment to innovation, collaboration and social impact Jangala continues to work to create a brighter and more connected future for everyone.



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SOLE x International Organization for Migration (IOM) Valle del Cauca, Colombia

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Jāngala

Sponsored by Lenovo

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FINANCES

In the financial year 2022/23 Jangala experienced remarkable growth in income – more than tripling the income generated the previous year (2021/22).

Voluntary Income 2022/23

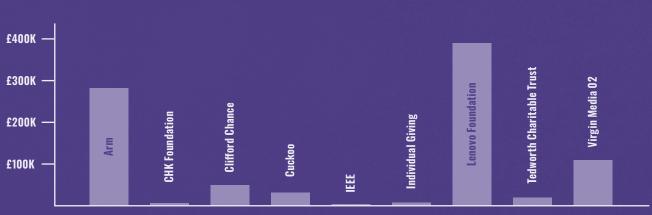
This significant financial increase can be attributed largely to the unwavering support of our valued corporate partners. Among our partners, Lenovo Foundation was our largest funder this past financial year.

Lenovo Foundation plays a pivotal role in enabling the deployment of our Wi-Fi systems to education projects worldwide. In addition to supporting education initiatives, Lenovo Foundation also contributes to our research and development efforts.

Another prominent partner supporting our research and development endeavours is Arm – our second largest funder. Arm's generous contributions are directed towards advancing Jangala's research and development projects.

Notably, the figures presented include Arm's donations for both 2022/23 and 2023/24 as both donations were made within the same financial year. The 2022/23 donation was received in April 2022, followed by the 2023/24 donation in February 2023. We are also grateful to Cuckoo – broadband for good – which donates 1% of revenue through their Cuckoo Compass programme to support Jangala's work.

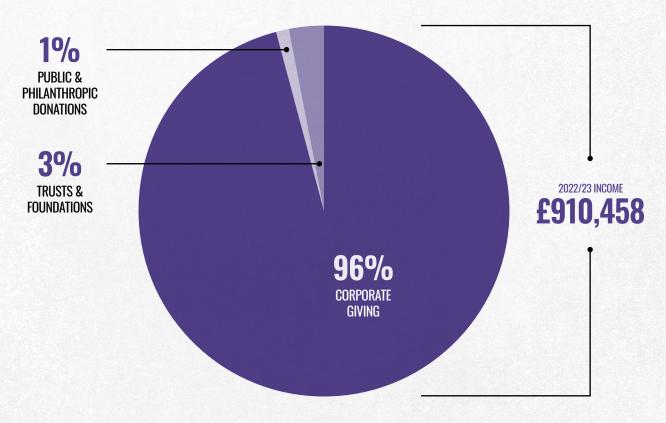
We are immensely grateful for the continued support of all our corporate partners. As we continue to grow Jangala's impact together over the coming years, we will look to diversify our funding sources with this solid base. We are committed to actively seeking opportunities – both within our networks and beyond – to cultivate partnerships with other like-minded organisations, exploring collaborations that align with Jangala's mission and values.



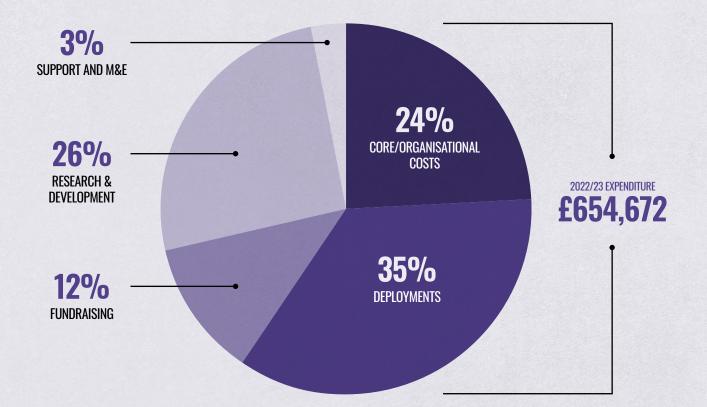
JANGALA'S FUNDING 2022/23

Funding Sources

INCOME



EXPENDITURE



Expenditure 2022/23

In the financial year 2022/23 Jangala had a substantial increase in expenditure (exceeding £300,000) compared to the previous year (2021/22). This rise in expenditure provided us with the means to expand our team and scale our operations. It is also enabling significant income growth.

A sizable portion of our expenditure (35%) was dedicated to deployments and supporting existing deployments in the field. Over a quarter of our expenditure was directed towards research and development – which allowed us to enhance the capabilities of our systems.

A further 36% of expenditure was allocated to organisational costs and fundraising efforts. Organisational costs encompass various operational expenses including office and workshop rent, utilities and administrative support as well as time spent on organisational development. Fundraising activities enable us to secure the necessary financial resources to sustain and expand our mission.

As Jangala continues to grow and evolve we will maintain a responsible approach to financial management, closely monitoring our expenditure and ensuring that resources are allocated in a manner that maximises our impact.

Reserves Policy

Jangala recognises the importance of maintaining a solid financial foundation to ensure the continuity of our operations. To this end, we endeavour to hold reserves that are sufficient to cover six months of current staff salaries and fixed costs. In 2022/23 our excellent income results enabled us to increase our operational reserves above the original target.

- ECHO Library Kivnin Bibliodikn WiFi Di Jangala Majus polaze Da Elpacze elu rave Da Elpacze elu rave ECHO Mobile Library Greece

THANK YOU & ACKNOWLEDGEMENTS

Over the past year, Jangala has been the grateful recipient of the dedicated support of a number of funders. Each and every one of our funders has contributed in a myriad of different ways, helping us to connect people in communities worldwide to Wi-Fi that otherwise they might never have.

Jangala couldn't have achieved this impact without you. All of our achievements over the past year are a testimony to your efforts and commitment to helping us deliver on our mission.

We'd like to say a big thank you to: Arm, CHK Foundation, Clifford Chance, Cuckoo, Herbert Smith Freehills, IEEE Connecting the Unconnected Challenge, Lenovo Foundation, Tedworth Charitable Trust, Virgin Media O2 and The Worshipful Company of Management Consultants for your ongoing financial support, donations in kind, skill sharing and for your incredible generosity of spirit. We'd also like to show our gratitude to our trustees, advisors, consultants and wider supportive network of friends of Jangala and colleagues in our partner organisations – both those mentioned in this report and our longerstanding partners.

Thank you for being with us on this journey and for your continued commitment to Jangala. Together we are empowering marginalised and underserved people – both in the UK and globally – with the amazing power of the internet.



The Tedworth Charitable Trust





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