



DIGITAL READING IN KENYAN LIBRARIES: LESSONS FROM PILOT TO SCALE



TABLE OF CONTENTS

Foreword	2
Executive Summary	3
Introduction	4
LEAP Pilot	5
Why Scale?	7
5 Key Insights from Scaling	8
1. Start Slow, Start Smart	8
2. Leverage Economies of Scale	10
3. Step by Step: Implement in Phases	12
4. Manage Change: Creating a Unified Vision of Success	14
5. Implement Sustainably from the Start	16
Conclusions and Recommendations	19
References	20
Further Reading	20

FOREWORD

Worldreader started in 2010 with the vision of a world where everyone could be a reader. With 757 million people held back due to low literacy levels, Colin McElwee and I knew that if we wanted to move the needle on literacy, contribute towards the UN Sustainable Development Goal on Education, and truly get the world reading, we were going to need great partners who understood working at scale.

In 2014, I had the pleasure of meeting Richard Atuti, the Director-General of Kenya National Library Service (knls). Since then we have built a partnership that has resulted in the adoption of digital reading throughout the public library system in Kenya. And along the way we have learned enormously from each other.

For instance, in the early years of my Amazon career, our watchwords were “Get Big Fast.” But as you’ll see in this report, “Start Slow, Start Smart” proved to be a much more helpful approach in working together, building trust and slowly integrating our approaches and thinking along the way. The results - including over 500,000 e-reader check-outs in and outside the library walls - exceeded our wildest expectations.

Ultimately, we’ll all create a world where everyone can be a reader, as other forward-thinking organizations like knls adopt digital reading solutions and make them their own. As Richard Atuti notes in this report, “Partnership is the game-changer.” Scale comes not as the goal but as the result.

We look forward to sharing more about this insight, and four others, with you in this report. We hope you find them useful. Together, let’s work towards a better world, a more just world, a world with opportunities for all, and yes, a world where everyone can be a reader.



David Risher
CEO, Worldreader

EXECUTIVE SUMMARY

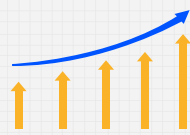
Mobile technologies have become more normalised for data collection, education for displaced communities and interventions at a distance. Yet, questions remain around how to effectively bring these technology interventions from pilot efforts to broad scale adoption. Worldreader is demonstrating operational success in its digital reading programs in Kenya. In 2014, Worldreader, in partnership with the Kenyan National Library Service (knls), launched its digital reading program, called LEAP (Libraries E-reading Activities Partnership) in eight libraries. By December 2017, LEAP had successfully scaled to all 61 public libraries in the country. The scale-up increased knls' collection by 38%. Between June 2016 and September 2017, 314,424 library users checked out e-readers. Through outreach activities, librarians were able to loan out the e-readers outside the walls of the library a further 250,807 times. This paper outlines five key insights moving from pilot to country-level scale, as noted below. These learnings can inform others leveraging technology to improve education around the world and contribute to strengthening an effective, responsible and efficient ecosystem of technology-enriched educational programs.

1.



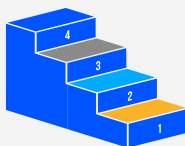
Start Slow, Start Smart

2.



Leverage Economies of Scale

3.



Step By Step: Implement in Phases

4.



Manage Change: Creating a Unified Vision of Success

5.



Implement Sustainability from the Start

INTRODUCTION

We live in a digital world. Internet penetration in Africa is growing exponentially,¹ and with it has come a plethora of digital goods and services that characterize the world we live in today. In 2016, the number of mobile money accounts in Sub-Saharan Africa overtook the number of conventional bank accounts in the region.² In recognition of this rapidly-changing world, the Kenya National ICT (Information and Communication Technology) Masterplan 2014 - 2017 sought to “provide the integrated infrastructure backbone required to enable cost-effective delivery of ICT products and services to Kenyans.” This focus was echoed in Kenya National Library Services’ (knls) strategic plan for 2012-2017, which put forth the vision of “becoming the hub for information and knowledge for empowerment.”

Digital media can be distributed without incurring costs for warehousing, shipping, and physical distribution. These cost savings are further amplified when compared against books that serve minority language populations,³ as paper books are more expensive to produce in small print runs. It is therefore no surprise that providing digital books can be more cost-effective than provisioning paper books -- for example, the annual cost to deliver four paper textbooks to a child in Sub-Saharan Africa is \$4.14⁴ on average. That is roughly on par with the annual cost of delivering 100 digital books (including textbooks, reference guides, and storybooks) to a child in Sub-Saharan Africa, which is \$3.54.⁵ Likewise, we see these cost reductions associated with scaling digital interventions. Initially the cost per ebook delivered was \$4.55 at pilot stage; however, this decreased to \$1.80 per book delivered at national expansion.

Despite technology enjoying economies of scale, technology-based interventions have often struggled to scale. In an area that has seen many “flashy, one-off pilots,” as well as hackathons and contests that have “undermined the potential for sustainable and scalable digital solutions,” it is not uncommon to have multiple programs test at the same time without being meaningfully linked (Cheng, 2017). In fact, Uganda’s Ministry of Health once saw as many as 80 consumer-facing mobile health pilots all operating at the same time, which resulted in an overwhelmed Ministry of Health and a government-issued moratorium on mHealth pilots,⁶ until efforts could be coordinated.

With the development world recognizing mobile technology as a powerful lever to reach previously-underserved communities, our collective learnings should be leveraged to inform effective and responsible scaling of technology-enabled programs. With this goal in mind, this paper highlights five key insights that led to success in scaling LEAP, a digital reading program implemented throughout Kenya’s public libraries.



¹ See Gyori, 2018.

² See Gupta, 2018 “Going Digital in Africa.”

³ See Heavner & Lowe, 2017, Reading Programs in the Digital Age: The case for print/digital format neutrality.

⁴ See Fredriksen, B., Brar, S. & Trucano, M. (2015). Getting Textbooks to Every Child in Sub-Saharan Africa.

⁵ Based on average cost over 10 Worldreader programs.

⁶ See the Digital Impact Alliance, 2016, “Fending Off ‘Pilotitis’ in Global Tech.”

LEAP PILOT

In 2014, Worldreader deployed 200 e-readers, each with 225 book titles, to 8 public and community libraries in Kenya (25 devices per library). Worldreader distributed a total of 44,000 books, curated equally from African publishers and US and European publishers. To ensure content was meeting community demands, librarians directly selected a number of these titles themselves.

The primary successes of the program included an almost threefold increase in library visits - from 10,442 to 29,023 patrons per month, 254 library-initiated community events, and 20,000+ patrons reached through e-reader trainings. 84% of patrons reported reading more. E-reader breakage and loss was low, at 2.5% over the course of the pilot.

In addition, librarians found that the portability of the e-readers made them a natural fit for outreach activities in nearby schools and community centers. An unexpected benefit of the popularity and portability of the devices, these outreach activities increased the profile of the libraries and encouraged people who might not have known about the libraries to come and visit.

CHALLENGES

For all the successes of the LEAP pilot, it was not without its challenges. Librarians saw the pilot as “extra” work, and it was difficult to find time to manage the project. Amplifying the burden on librarians, the LEAP pilot required completion of monthly monitoring forms, and the use of other monitoring and evaluation (M&E) tools that were separate from knls-wide monitoring. As a result, librarians regarded the pilot as being “off to one side.” Since knls had not built digital reading program management into librarian job descriptions and work plans, there was a lack of accountability, ownership, and rewards, which meant there was little incentive for librarians to embrace digital reading technology.

In addition, the libraries reached in the pilot were quite diverse, ranging from rural to peri-urban to urban, from small to large, from a sparse room to those air-conditioned with WiFi. Some librarians had access to transportation to conduct outreach activities, and others did not. Some libraries were close to prisons, others close to schools and scout camps. Given the wide range of libraries that the pilot reached, it was challenging to come up with a prescriptive list of library activities and other programmatic guidelines that could be applied uniformly, across the board.

As a result, both Worldreader and knls decided to allow libraries to come up with their own outreach activities independently, choosing instead to invest in growing the capacity of knls staff; and on better integrating the project into knls’ structures, policies, and systems. As outlined in the spotlight box, the library outreach activities both in the pilot and at scale were incredibly varied based on surrounding community resources and many would not have taken place if Worldreader or knls had been more prescriptive about librarian outreach activities.



Spotlight: Library Outreach During The LEAP Pilot

During the LEAP pilot, training and outreach into the communities were the main drivers behind the large increases in patronage observed over the course of the program. Because e-readers are more portable than paper books, this makes them an ideal tool for librarians looking to go out into their communities to engage students and others in reading activities.

The most common outreach activities took place in neighboring schools. Common formats for school-based outreach were to train and/or provide e-reader activities for one class per school visit, or to organize book clubs of 10-12 students. Other types of outreach activities included:

- Reading tents at community events
- Library marketing and membership campaigns at local events
- Reading clubs, debates, lectures, and book talks
- Community literacy campaigns
- Reading competitions
- Computer/ICT trainings
- Health awareness sessions using materials on the e-readers
- Outreach to local businesses⁷
- Attending county scouts camp with e-readers



⁷ This involved visiting neighbouring businesses to tell them about the digital reading program at the libraries so that the business owners could spread the word. In one case a beauty pageant was organized and the contestants were tasked with sensitizing the community on digital reading.

WHY SCALE?

In 2013, when Worldreader was designing the LEAP pilot, Kenya National Library Service (knls) had identified the following concerns regarding technology in libraries in its *2013-2017 Strategic Plan*:

- Obsolescence due to rapidly changing technologies;
- Increased demand for automation and virtual access;
- Increased shift towards e-commerce and telecommunication technologies;
- Increasing need to build, preserve and provide digital content.

During this period, knls was only able to expand its collection by one new book per registered member each year.⁸ There was therefore quite an appetite within knls for a new way of working, and the LEAP pilot was seen as a potential answer to all four of these concerns. However, in order for the pilot to be successful, knls and Worldreader would have to answer the following questions, which were identified before the pilot was kicked off:

- What is required to deploy and integrate e-readers in libraries?
- Does access to e-readers increase a library's usage by increasing the number of patrons who visit?
- Do e-readers encourage library patrons to read more?
- What is the cost-effectiveness of using e-readers in libraries?
- What is required to scale this pilot nationwide and beyond?

The final question shows a joint interest in identifying the resources required to scale -- if the LEAP pilot proved to be successful -- if e-readers were successfully deployed and integrated in libraries, if more visitors frequented libraries, if library patrons read more, and if the program proved cost-effective -- then both Worldreader and knls had eyes set on taking advantage of the lower cost and complexity of digital reading at scale. In fact, all these conditions for success were met, and as such, the LEAP pilot had the potential to address multiple challenges that knls faced. LEAP was an experiment that was designed for scale, right from the beginning.

LEAP Scale-Up Results and Key Performance Indicators

- Worldreader and knls deployed 3,000 e-readers containing a total of 600,000 e-books to all 61 public libraries across Kenya. This addition of digital books increased knls' collection by 38%.
- 314,424 library users checked out e-readers.
- Outside the library, through outreach activities, librarians were able to loan out the e-readers 250,807 times.
- Libraries registered 38,604 new members.
- Juniors made up the majority of e-reader usage and membership, borrowing e-readers an average of 1,200 times per month, followed by adult patrons who borrowed an average of 480 times per month.
- At project close-out, 98.5% of the e-readers deployed were reported as functional, meaning the project achieved a breakage and loss rate of 1.5%.

⁸ See Kinya, 2011, *Public Libraries in Kenya: Collection Development*.

5 KEY INSIGHTS FROM SCALING

Jumping quickly from the pilot in eight libraries to scaling through all 61 public libraries in Kenya meant learning continued throughout the scaling process. In hopes of replicating the LEAP project in other library systems, Worldreader was deliberate in designing an adaptable and iterative model and taking time early on to start slow and design for sustainability. The process led to five key insights: Start slow, start smart; leverage economies of scale; implement in phases; manage change through a unified vision of success; and implement sustainability from the start.



1. START SLOW, START SMART

Throughout the process of scaling, Worldreader found that designing for the end user and keeping ICT programs relevant is key to success at scale.⁹ Indeed, as research has shown, “designing interoperability into systems at the outset, rather than assuming that this can be achieved at some point in the future, may prove far easier in the longer term”. (Huang, Blaschke and Lucas, 2017). It was therefore crucial to take extra time at the planning stage to properly design for the scaling and sustainability of the program. The strength of Worldreader’s partnership with knls, an active local authority, and the time spent early on to negotiate and solidify logistical roles and responsibilities of the two partners laid the foundation for scaling the LEAP project. When asked for the key takeaways from the LEAP project, Richard Atuti, the Director of knls emphasized that, “Partnership is the game changer.” This sentiment ran both ways. Sustainability and full adoption of any technology-enabled reading program relies on the partnership of a local authority who is able to navigate government processes and take responsibility for carrying the program forward through their existing systems.

“Partnership is the game changer. In everything you do embrace partnerships – they add value and you will stagnate without them. Partnerships help you look at things with a different perspective.” – Richard Atuti, knls Director

With a focus on collaboration from day one, Worldreader and knls were able to build a Memorandum of Understanding (MOU) and scope of work that clearly outlined roles focusing on the strengths of each organization and plan for sustainability at the outset. In a reflection of one of the realities of nationwide scaling, negotiations over these terms delayed the project start by six months, but ultimately led to a much stronger partnership and programmatic design. Knls took full responsibility for incorporating the program into its long-term strategic plan, investing in capacity-building and training of its current and future staff and allocating funding to sustain the program after the initial two year project implementation period. Combined with Worldreader’s commitment

⁹ See Oskouipour & Cotrel-Gibbons, 2017, “4 Ways We Overcame ICT4D Pilotitis in Vietnam,” and School to School International, 2017, *E-books 4 Khmer end of project* report for further examples.

to the provision of low-cost e-readers loaded with e-books in Kiswahili and English for all 61 libraries and comprehensive capacity building for librarians, the two organizations supported each other's efforts, and played to their known strengths.

Taking a collaborative approach to local partnership leads to sustainability when it involves building capacity among all levels of management and enhances existing systems, rather than reinventing the wheel. For example, Worldreader and knls were jointly responsible for designing and implementing a training model, raising public awareness about the program, and monitoring and evaluation (M&E). Shared M&E responsibilities included defining indicators and targets for the digital reading program and designing an M&E plan that integrated with knls' existing monitoring and evaluation process to add less strain to the librarians workload and avoid the implementation of additional reporting requirements at the libraries. This approach to M&E unfortunately led to some challenges since Worldreader and knls didn't collaborate closely enough on some of the specifics of data collection in the early phases, and instead re-focused their M&E efforts part way through the project.

Neglecting to 'start slow' with M&E led to some language inconsistencies on integrated M&E questions that became challenging to analyze and missed opportunities to quality check data upon monthly collection in order to provide more immediate feedback and follow up on discrepancies with project managers and librarians. While digital data collection tools would help this process, Worldreader would have been better served by fully engaging with knls' existing monitoring systems prior to implementation, and making sure knls' monitoring process was clearly outlined for Worldreader, with a glossary of terms, so that they could better align their monitoring questions.





2. LEVERAGE ECONOMIES OF SCALE

One of the biggest advantages to scaling a digital reading program is the argument for cost-savings at scale. For knls this took the form of cost savings on content, as well as the appeal of space saving techniques that come with digital books. According to the World Bank (2015), the average annualized

“An e-reader is a library on its own”

Meru Junior Student, knls Meru

cost to deliver four paper books in Sub-Saharan Africa per Child is \$4.14.¹⁰ By comparison, Worldreader calculated the average annualized cost to deliver 100 digital books in Sub-Saharan Africa per Child at \$3.54.¹¹ With scale, these price points are even more beneficial. As noted in the introduction, in the original LEAP pilot, the cost per book delivered was \$4.55. This came down to \$1.80 per book delivered when the project was expanded nationally.

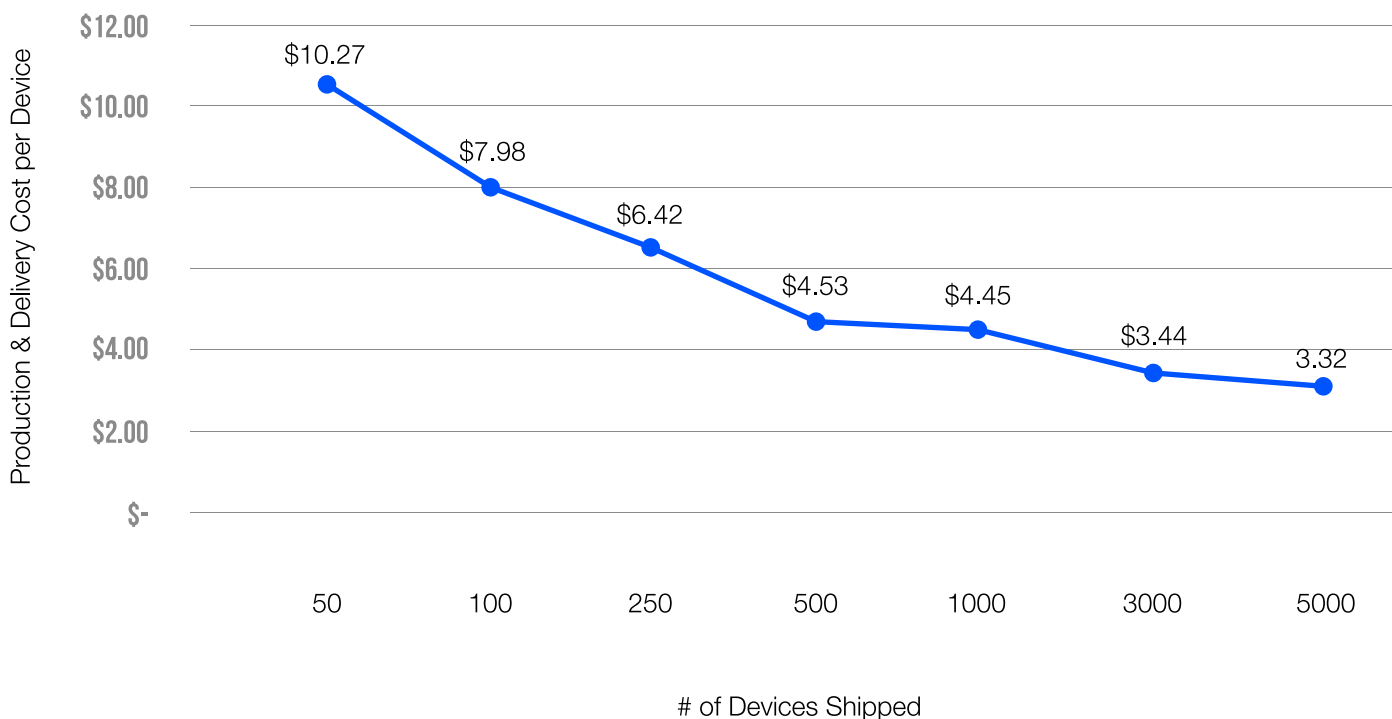
Knls nearly doubled their collection within a year, resulting in e-books now accounting for 38% of the library collection.



¹⁰ See Fredriksen, B., Brar, S. & Trucano, M. (2015). Getting Textbooks to Every Child in Sub-Saharan Africa.

¹¹ Based on all inclusive cost of 10 large-scale Worldreader programs in Sub-Saharan Africa.

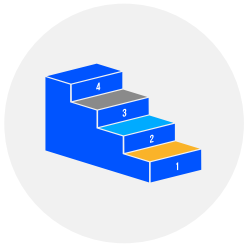
When asked for his primary motivations in pursuing a digital reading program, the Director of knls responded that knls embraced the project because there was a trend in the world to go digital in order to avail content faster and more easily and to help with space management. When asked to clarify this point he responded that libraries have a challenge with constrained space and that digital devices are helpful tools for space saving (Worldreader personal communication, February 1st, 2018). To illustrate this point, knls has been operating since 1969; through the digital books distributed during LEAP 2.0 knls almost doubled their collection in one year with the e-books now accounting for 40% of the library collection, yet they fit in one shelf or cupboard.



Knls also emphasized their motivations to go digital due to the pricing model for digital books that ultimately allowed them to reallocate funding to other activities. Taking into account the entire cost of the project at scale, including indirect costs, each book delivered cost USD\$1.80. When taking into account the average lifespan of at least five years for each device,¹² this cost goes down to USD\$0.36 per book,¹³ per year. Compared to print book prices of roughly \$1 (Fredriksen, Brar and Trucano, 2015) and an estimated average lifespan of 2 years for a paperback library book, digital books can lead to significant cost savings. Furthermore, the cost of each device is reduced when purchased in bulk due to money saved on bulk shipping and reduced production costs as a result of bulk device processing. Based on current delivery and production costs, Chart 1 shows the cost of production and delivery per device decreasing by 68% as the number of devices being processed increases from 50 to 5000.

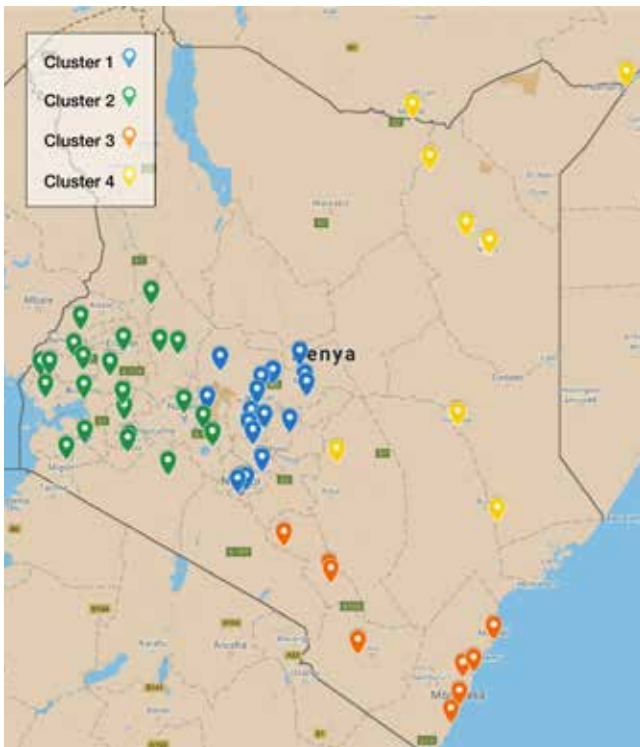
¹² See Worldreader, 2017, *Device Durability Report* retrieved at: <https://www.worldreader.org/learnings>

¹³ Knls, personal communication, 2015; supported by Library Thing discussion on average shelf-life (note a difference in weather and library conditions for these statistics that average 30-50 circulations as a book's lifespan) see <http://www.librarything.com/topic/135024>



3. STEP BY STEP: IMPLEMENT IN PHASES

In order to successfully implement this technology-enabled reading program at scale, it was necessary to structure a phased roll-out to leave room for learning and iteration as the project progressed. Knls designated four clusters at the beginning of the project in order to effectively deliver devices, train staff, and manage implementation at such a large number of institutions. Since the pilot only comprised eight libraries and each of the first two clusters held at least double that many library sites, it was necessary to stagger the roll-outs to leave room for learning and process improvements for future clusters.



Delivery of devices was thus done in four phases, three to six months apart, to four regional clusters that were selected based on convenience for knls and Worldreader. The selection of the clusters took into proximity as well as regional safety and security of staff. Phasing roll-out allowed Worldreader and knls to better plan for costs associated with implementation, update materials according to feedback from Clusters 1 and 2, and adjust book lists according to the demographics of the clusters and local librarian requests. The digital tools facilitated the process when knls decided to adjust the booklist for Cluster 4 in order to provide content that was more relevant to the library patrons in the Northeast Region. If the books had been acquired in print, this process would have taken much longer and been more costly to adjust due to additional shipping costs and added delivery time. Instead, with a few clicks of a button, Worldreader was able to assign a different set of books to the Cluster 4 devices that were easily downloaded with a secure WiFi connection.

Worldreader designated one project assistant for each of the first three clusters, and remote support through phone and WhatsApp for Cluster 4 librarians. The project assistants were in constant contact with the cluster librarians to help resolve technical issues and resolve any issues with the ereader program implementation at their libraries. On average, the project assistants visited Cluster 1 and 2 libraries once per month. Cluster 3 had fewer libraries so they were visited about two times per month.

Worldreader led trainings for librarians from each of the clusters separately at the beginning of the cluster implementation period. Worldreader and knls made adjustments to each formal cluster training based on lessons learned from the prior training and deployment. For example, feedback from the pilot phase on knls involvement in the trainings prompted Worldreader to increase knls' facilitation and leadership throughout the project. Worldreader fully facilitated the Cluster 1 training, but knls took on a greater leadership role for Clusters 2 and 3, leading sessions and working groups. As part of this initiative, Worldreader worked with knls to select a group of librarian e-reader champions to act as future trainer of trainers (ToT).

The ToT trainings were part of a sustainability measure in order to embed digital reading program trainings within knls and phase-out Worldreader's training role by 2018. Due to the phased roll out and cascaded trainings, knls and Worldreader enlisted a few of the ToT trainers to train the Cluster 3 librarians as early as January of 2017, with a more comprehensive ToT sustainability training held in October 2017. Worldreader and knls chose to adjust trainings for Cluster 4 librarians from one to two days, since this last group would not be receiving continued site visits and support from Worldreader staff and thus had to be better prepared to implement the program on their own. Due to the nature of the training, both knls and Worldreader took active roles in training the Cluster 4 librarians.

Finally, the phased roll out allowed knls to invest in and hire ICT officers who are now designated to fulfill Worldreader's supporting role in the digital reading program. The knls ICT officers are responsible for managing future ereader trainings and now act as regional contacts for the librarians to address ereader and ICT technical challenges, and advocate for knls ICT programming.





4. MANAGE CHANGE: CREATING A UNIFIED VISION OF SUCCESS

When it comes to technology-enabled programming, there are often concerns that there will be resistance to the technology and its associated process changes. With a scaled roll out of a digital reading intervention, this was certainly a concern and a challenge faced by both knls and Worldreader throughout both the LEAP pilot and scale. In their study, *Beyond pilotitis: taking digital health interventions to the national level in China and Uganda* Huang, Blascke and Lucas (2017) stress, “the importance of recognizing the political, social and historical context within which information systems have to function,” suggesting that a focus on the “perceptions, attitudes and needs of stakeholders” is just as vital as emphasis on the technology itself. Engagement should be sought both at an institutional level and from individual stakeholders. The LEAP project emphasized this point. Since the project had the advantage of knls institutional management support at project outset, LEAP placed more emphasis on the support needs of individual librarians. This approach proved ever more critical when working across districts of varying levels of connectivity and exposure to technology within their communities.



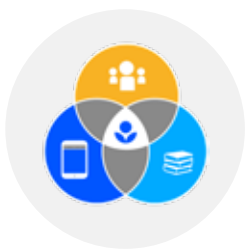
Through the pilot, both organizations learned that there was not enough support given to librarians to encourage their behavior change and support device uptake. In order to address this challenge at scale, knls and Worldreader worked to build out key targets and incorporate digital reading job requirements into the librarian job descriptions. This approach helped to emphasize the role of the librarians in supporting the digital reading program, so that management of the ereaders was squarely structured as a librarian responsibility. Coupled with improved Worldreader staff support through regular check ins from regional project managers, librarians responded much more positively to uptake of the program.

The knls technical team spoke of librarians who tried to avoid responsibility of the ereaders by passing them off as a job for IT staff. Knls addressed this by implementing monthly reporting that included targets for e-reader outreach and borrowing. By meeting these targets the libraries are entitled to further funding to support new programs. This structure has established incentive for the librarians to succeed in their digital reading program and utilize the digital resources at their disposal. It also required the visionary leadership of knls and Worldreader in emphasizing the advantages of the digital reading program for the libraries and the opportunity the devices now provide for outreach and resource mobilization.

Worldreader's attempt to add a mobile phone intervention into the project, after the initial planning phase was complete and the project had already launched, further emphasized the need for a shared vision. In hopes of providing further availability of reading materials to the libraries, Worldreader promoted its free online library of over 35,000 books - available through mobile phones - through banners in the libraries. This element of the project had the least success. Librarians did not embrace mobile phones as a tool for reading, and therefore the mobile component observed low user uptake. While there may have been technological limitations at play,¹⁴ librarians also expressed that the idea of free reading materials on phones felt threatening -- would phones replace the library? If that were to occur, how would the role of a librarian shift? It's interesting to note that these reactions are similar to those that librarians in other countries, like the US, have expressed due to the rise of technology (Garner, 2014, p.42-43). In starting this intervention midstream, Worldreader underestimated the amount of investment in staff time and conversations that it would take to build a shared vision with knls and with individual librarians, in which mobile phones could be leveraged as an added resource rather than potential competition for library services.



¹⁴ Worldreader observed three common technological limitations as a part of the LEAP scale: 1. There were data connectivity challenges in some fairly remote locations. 2. Cost of data was a barrier for some librarians who were unwilling to purchase data, even where a data connection was strong. 3. In some cases there were no data connected phones in the area - a more common challenge for remote, rural libraries. Future programs should consider addressing these limitations and discussing alternative connectivity solutions as part of the partnership discussions during the design and MOU process.



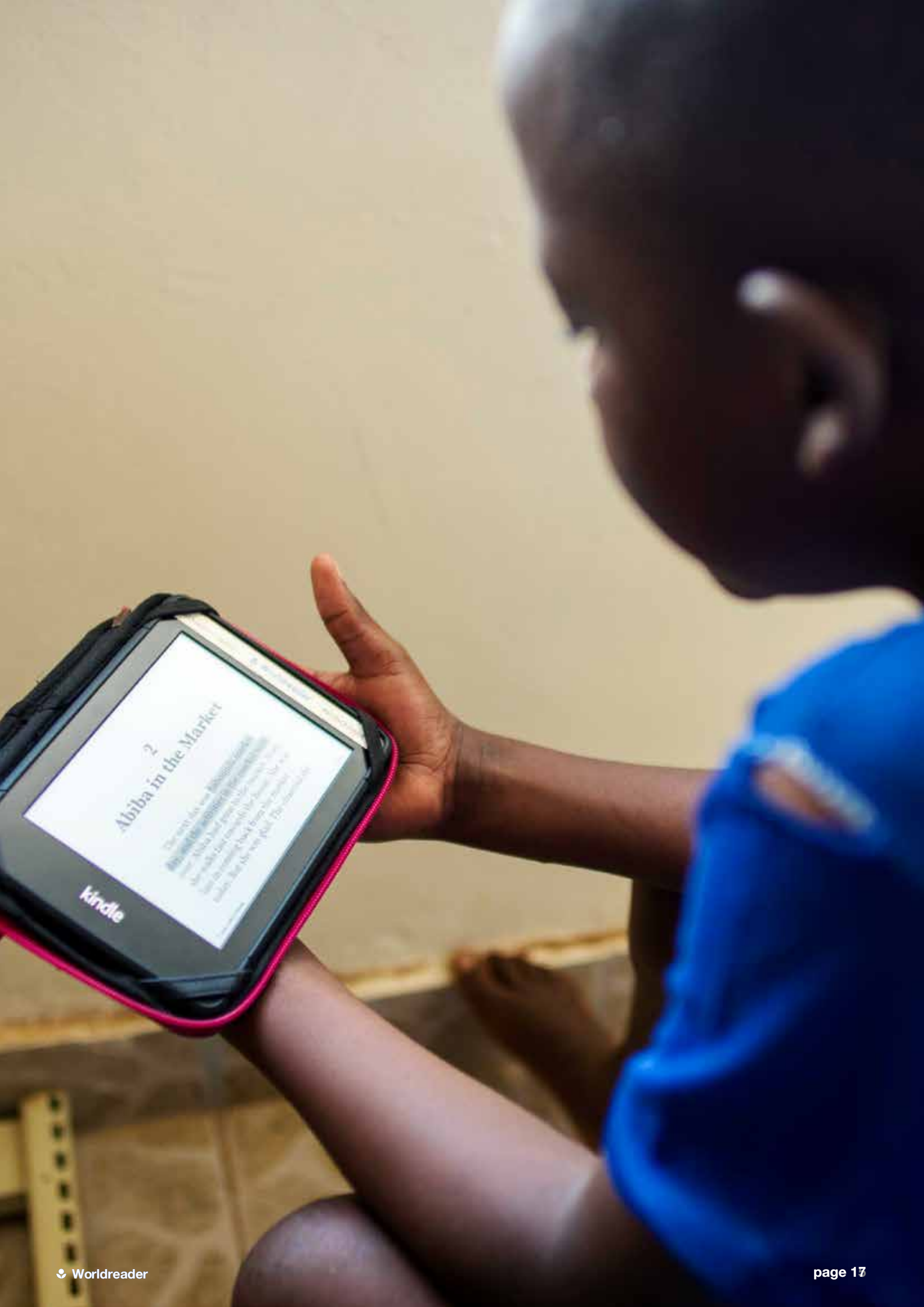
5. IMPLEMENT SUSTAINABILITY FROM THE START

One of the most crucial parts of this partnership and the successful scale of the digital reading intervention was knls' willingness to invest in the future of the digital reading program. Only with continued investment from knls would there be a sustained future for digital reading within public libraries in Kenya. For LEAP 2.0 this meant supporting the program with existing knls funding streams to build for sustainability at the project planning phase. To this end, knls and Worldreader built sustainability into their MOU by provisioning that knls would invest in training its headquarters and branch library staff with skills to lead e-reader programs and have fully assumed responsibility and cost of sustaining and growing the digital reading program by 2018.

During the pilot project Worldreader covered all costs associated with implementation. Both parties agreed that in order to ensure sustainability from the start of LEAP 2.0, knls would need to cover additional project costs from day one and build these costs into future knls budgets. This included covering customs fees at port for the e-readers, paying for librarian training, and paying for community launch events. By staggering the deployment across four clusters the partners ensured that costs could be spread out and predictable, so that knls could properly build the program into their budget.

As a further measure for sustainability, trainings started early on and were repeated often. Worldreader and knls trained two librarians from each library and encouraged them to train their library support staff in turn. Furthermore, by passing on trainings to knls staff and acting in more of a support role by the end of the project, Worldreader built capacity within the knls technical team and through the ToT trainings of champion librarians to further advocate for the digital reading program. Attendees for the ToT training included 13 knls ICT officers, 18 librarian ambassadors from Clusters 1-4, and four members of the knls technical team.

Trainings also took into account the financial sustainability of the libraries by encouraging librarians to use the e-reading devices to mobilize resources from their communities and procure additional funding for their libraries. The portability of the devices makes them a good tool for the promotion of library resources and they are known to garner excitement from community stakeholders. Resource mobilization trainings encouraged librarians to approach local government, politicians, and entrepreneurs to secure further funding for their libraries, and use reporting data to support their library stories.



2 Abiba in the Market

The next day was another busy day for Abiba. She had to go to the market to buy some things for her family. She was excited to see her friends there. She saw her friend Fatima and they talked for a while. Then she saw her friend Amina and they talked for a while. She was happy to see them. She was also happy to see her mother. She was happy to see her father. She was happy to see her brother. She was happy to see her sister. She was happy to see her family. She was happy to see her friends. She was happy to see her school. She was happy to see her life. She was happy to see her world.

Kindle

Spotlight: A Happy Marriage Between Digital and Analog Books in Rumuruti

Rumuruti is a town in Laikipia County in Kenya's former Rift Valley Province. The Rumuruti library sits on a piece of land that was previously home to a bar. Several years ago the town took over the land and donated it to provide space for one of Kenya's public libraries. One of knls' most motivated librarians, Agnes is the Head Librarian at Rumuruti and a major advocate for the ereading devices in her library. Known throughout the district, she often travels up to 30km to do outreach to schools and supports the numerous nomadic communities that travel through the area with library outreach activities.

With limited resources at her disposal, Agnes takes it upon herself to advocate for her library with local officials and apply for a variety of funding opportunities. She hosts reading circles at the library where library patrons will often sit outside under a tree and perform a variety of reading activities. She also does outreach to schools to encourage them to join the library and pay for her transport to come and bring her books and ereaders to their classrooms. Agnes always makes a point of bringing both ereaders and paper books to her events. She often matches books on the ereaders with analog books on the library shelves to show that the books are the same and encourage everyone to read, no matter the format.

For Agnes, the LEAP program has helped bring her library into the future. She is able to train teachers, local school board members and students alike on the devices, while using them to advocate for her library and spread a culture of reading throughout her community.



Knls has fully planned for the sustainability of resources such as the devices and acquisition for future ebooks and ICT officers to continue project oversight. In addition to the support of the ICT officers, Worldreader produced a suite of short training videos highlighting three main e-reader modules: device navigation, user experience, and troubleshooting that will complement existing training resources provided to knls. All these indicators point to the promise of project sustainability and effective program implementation at scale.

In an interview with knls Director, Richard Atuti, he confirmed that in the next five years, he plans to achieve a 70% digital 30% print library content budget.

With a projected breakage rate of roughly 2% year to year, Worldreader anticipates the devices provided to knls to last for a minimum of five years each during which time knls has provisioned for replacement devices in their budget and Worldreader has provided proposed budgeting guidelines for additional content and additional devices. In an interview with the knls Director he confirmed plans for a 50/50 content model where half of the library content budget is allocated for digital books and half for print over the next five years moving towards a model of 70% digital and 30% print thereafter. Knls sees digital as a way of keeping the library relevant and motivating librarians to conduct outreach. There is little further motivation needed to sustain the project.

CONCLUSIONS AND RECOMMENDATIONS

As the development world turns towards the promise of digital through mobile technologies, these five insights can inform future technology-enabled interventions to responsibly and effectively take their programs to scale. While technology has the potential to open many doors, any future interventions will do well to remember that it is not an end in itself. In the case of LEAP 2.0 success at scale lies in the capacity building of local actors to carry forward the project. While digital tools facilitated access to quality books through the course of this project, it was the motivation of local librarians to strengthen their communities through reading outreach, the provision of relevant books to fill a need among library patrons, and a hunger for access to information that drove the LEAP pilot to scale.

While implementation is complete, there is still work to be done to carry the project into the future. This will involve responsible management of devices as they age, and a sustainable budget to continue the growth of the knls digital collection. At the end of a project, it is natural to wonder about its long-term viability. With a common vision of success, both knls and Worldreader are optimistic that by working together, their shared investments have built a sustainable public good for the community. Worldreader would be happy to continue partnering with knls in the future; however, after the two organizations collaborated very closely on this project, knls has demonstrated that they are now equipped with the tools they need to drive their digital reading program forward and continue on their path to being a hub of information and knowledge for empowerment. May some of the lessons learned through LEAP help other edtech practitioners and library stakeholders end their projects with similar measures of confidence.

REFERENCES

- Cheng, A.M. (December 6, 2017). Fewer Pilots, More Scale: Making Digital Development Work. *Huffington Post*. Retrieved from https://www.huffingtonpost.com/ann-mei-chang/fewer-pilots-more-scale-m_b_9345068.html
- Digital Impact Alliance. (May 23, 2016). Fending Off ‘Pilotitis’ in Global Tech. DIAL Digital Impact Alliance. Retrieved from <https://digitalimpactalliance.org/2732-2/>
- Fredriksen, B. and Brar, S. with Trucano, M. (2015). *Getting Textbooks to Every Child in Sub-Saharan Africa: Strategies for Addressing the High Cost and Low Availability Problem*. Worldbank Group: Washington D.C.. Retrieved from <https://openknowledge.worldbank.org/bitstream/handle/10986/21876/9781464805400.pdf>
- Garmer, A. (October, 2014). *Rising to the Challenge: Re-Envisioning Public Libraries*. The Aspen Institute. Retrieved from <http://d3n8a8pro7vhmx.cloudfront.net/themes/5660b272ebad645c44000001/attachments/original/1452193779/AspenLibrariesReport.pdf?1452193779>
- Gupta, J. (March 25, 2018) *Gulf News*. Going Digital in Africa. Retrieved from <http://gulfnews.com/business/sectors/banking/going-digital-in-africa-1.2193922>
- Gyori, D. (February 23, 2018). *The Asian Banker*. Africa’s ten key advantages in digital transition. Retrieved from <http://www.theasianbanker.com/updates-and-articles/africas-ten-key-advantages-in-digital-transition>
- Heavner, R. & Lowe, Z. (2017). *Reading Programs in the Digital Age: The case for print/digital format neutrality*. Worldreader: San Francisco, USA. Retrieved from https://comms.worldreader.org/wp-content/uploads/2017/01/The-Case-for-Format-Neutrality_Final.pdf?x33111
- Huang, F., Blaschke, S. and Lucas, H. (July 31, 2017). *Beyond pilotitis: taking digital health interventions to the national level in China and Uganda*. Retrieved from: <https://globalizationandhealth.biomedcentral.com/articles/10.1186/s12992-017-0275-z#Sec3>
- Kinya, Dr. H.D.S. (July, 2011). Public Libraries in Kenya: Collection Development. *International Journal of Humanities and Social Science* 1(9), 275-277. Retrieved from http://www.ijhssnet.com/journals/Vol._1_No._9_Special_Issue_July_2011/31.pdf
- Library Thing. (2012). Average shelf-life, or circulations. Web discussion posted to <http://www.librarything.com/topic/135024>
- Oskouipour, P. & Cotel-Gibbons, L. (September 20, 2017). 4 Ways We Overcame ICT4D Pilotitis in Vietnam. *ICTWorks*. Retrieved from <https://www.ictworks.org/4-ways-we-overcame-ict4d-pilotitis-in-vietnam/#.WyvcTxJKib8>
- School to School International. (November, 2017). *E-books 4 Khmer*. All Children Reading. Retrieved from <https://bit.ly/2yuUiRo>

FURTHER READING

- For more information on the LEAP Scale project visit Worldreader’s Learnings page at <https://www.worldreader.org/learnings/>
- For more information on the LEAP Pilot you can view the full pilot report at https://comms.worldreader.org/wp-content/uploads/2017/01/PROJECT_LEAP.pdf?x33111



worldreader.org



facebook.com/worldreader



@worldreaders

For more information about Worldreader's programs please contact **info@worldreader.org**

To read books on your mobile phone download the Worldreader app on the **Google Playstore** or go to **read.worldreader.org**.

United States

Worldreader Headquarters

40 Ringold St.
San Francisco, CA 94103 USA
Phone: +1 (415) 562-4840

Washington, DC Area

1521 Westbranch Drive, Suite 410
McLean, VA 22102 USA
Phone: +1 (703) 653-0081

Africa

Worldreader Ghana

No. 334, Salem Avenue
Kuku Hill, OSU
Accra, GHANA
Phone: +233 540 122490

Worldreader Kenya

Phone: +254 722 785 006

Europe

Worldreader Spain

Mallorca 318, 3^o 1^a
08037 Barcelona SPAIN
Phone: +34 930 131 276

Worldreader UK

20 Dartmouth Park Road
London, England NW5 1SX
UNITED KINGDOM

Asia

Worldreader India

House No. B 242, Lower Ground
Floor, Greater Kailash, Part-I
New Delhi, 110048 INDIA
Phone: +91 968 686 2387