

Making the invisible, **visible**.







“At Peek we are working with an amazing network of doers, donors and movement builders who are trying to reach over one billion people with reversible sight loss and connect them to the eye care they need. The size of the challenge is huge, and growing. Even with our collective efforts, the pace of population growth and ageing is outstripping the pace at which those needing care are reached.

Despite a growing target, limited resources and a global issue affecting more than a billion people that has been chronically under financed, I am convinced that we have reason to be hopeful that **the tide can change.**

Tipping points are elusive but they exist. The incredible work in eliminating infectious eye diseases like blinding trachoma, which at one time seemed impossible in many countries, is one inspiring example of what can be achieved when the **art of the possible is demonstrated.**

Evidence-based, well financed sustainable eye care delivery at new levels of scale, should be considered a realistic ambition. With bold, collective action, **we can reach the tipping point** and start to reverse the trend.”

**Professor Andrew Bastawrous**  
**Co-founder and CEO of Peek Vision**

Peek Vision is a social enterprise that powers eye health programme providers to strengthen systems and service delivery with a software and data intelligence platform. With Peek, eye health providers can identify and address gaps and inequalities in their services.

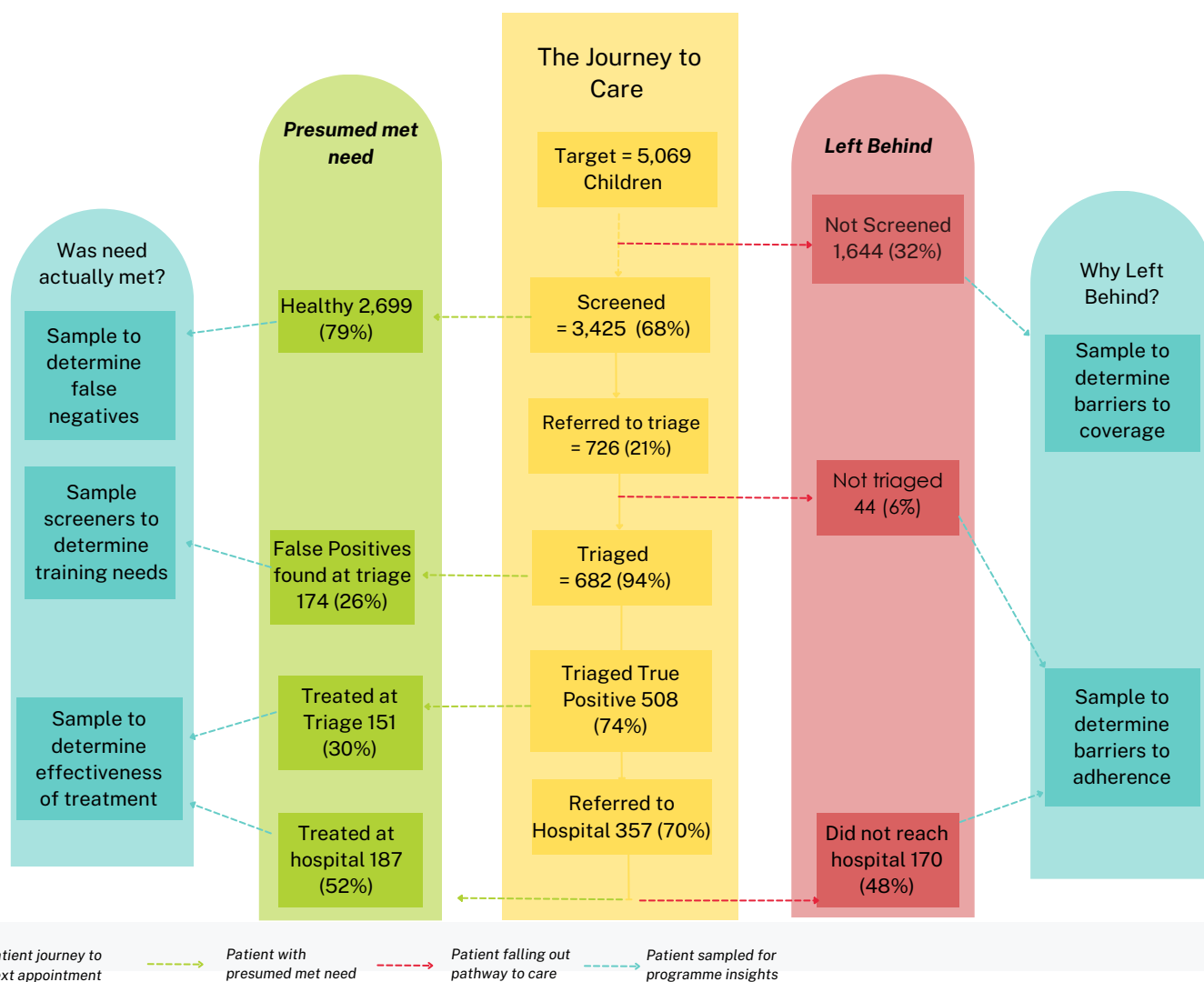
**By 2050, we aim to reverse the global trend and prevent 1.25 billion people from living with untreated vision loss.**

# Why does data matter?

We cannot solve the global vision crisis if we do not know the scale of the problem, including who is missed by current services. **Better eye health data, which can be gathered and easily analysed, can play a critical role.** A decade ago, gathering and analysing this data would have been so resource intensive as to be impossible. But Peek Vision's digital tools make it possible for eye health services to survey, monitor and analyse patient journeys with a fraction of the effort and resources required by conventional systems.

In many eye health programmes, success is measured by the number of people who are screened or treated. Although this helps services to understand how an eye health service is performing, it does not tell the whole story. It is essential that we consider everyone in the population when designing programmes and building systems so that no one is left behind.

What happens to the others - i.e. those that weren't screened, didn't receive treatment or for whom the treatment wasn't effective? These translate into measurable attributes of a service, which our partners can focus on when using our products (see figure below).





# Our Products

Our products have been developed in collaboration with eye health providers, professional bodies and researchers. They reflect global best practices in health systems decision-making. We currently offer eye health providers:

- Rapid Assessments: Software and tools to help programme planners understand their populations' eye health needs.
- Peek-powered Programmes: Software to implement, optimise and evaluate eye health services in schools and communities.

With Peek, eye health systems become more efficient, equitable and effective, and ultimately enable more people to reach the care they need.

## Rapid Assessments

School Eye Health Rapid Assessment (SEHRA)



Rapid Assessment of Avoidable Blindness (RAAB7)



## Peek-powered Programmes

School eye health programmes



Community eye health programmes



Population level eye health surveys and tools help our partners to plan and implement programmes.





# Our Evidence Base

**Developing and validating our screening test:** Research published in JAMA Ophthalmology in 2015 shows that our distance visual acuity testing app (Peek Acuity) is at least as accurate as conventional distance vision checks when used by non-specialist community health workers in Kenya, and is also slightly quicker than a conventional test. In an external systematic review of 14 mobile visual acuity tests in 2020, the Peek Acuity app was determined to have the best reproducibility and correlation with standard testing methods.

**Programme validation:** In Kenya, a school eye health programme powered by Peek was evaluated in a randomised controlled trial (RCT) comparing it to a conventional programme, published in The Lancet Global Health in 2018. Another RCT in Kenya compared a community eye health programme powered by Peek to a conventional programme, published in The Lancet Digital Health in 2021. The results from both demonstrated increases in adherence to treatment (e.g. triple the amount of attendances in the community programme) and better use of resources (e.g. the proportion of people attending hospital for eye problems that could have been treated at the primary care level reduced from 61% to 17%).

**Rapid Assessment validation:** The Rapid Assessment of Avoidable Blindness (RAAB7) and School Eye Health Rapid Assessment (SEHRA) were developed in collaboration with sector leaders and tested in pilot studies over several years.

## Further research for future product features:

- We have recently developed and validated a new smartphone-based near visual acuity test. Unaddressed near vision impairment (NVI) affects more than 500 million people, and this technology can complement the existing distance vision check app. We will continue to develop the evidence base for this test and aim to include it as part of our Peek-powered programme software in future.
- Future research includes adaptive trials inspired by methods routinely used in software development. These trials will allow service providers to rapidly evaluate different ways to improve services, with the methods being developed having the potential to transform health service improvement in other fields beyond eye care.



# Rapid Assessments

## *The problem Rapid Assessments aim to solve*

To plan, fund and implement effective community and school eye health programmes, health service personnel need to understand the prevalence and types of eye health problems in the populations they serve. Without this information, this can lead to inefficiency and increased pressure on eye health services that may already be strained.

## *Rapid Assessment of Avoidable Blindness* **RAAB7**

Delivered digitally, RAAB7 is the new generation of RAAB survey that enables faster, more accurate collection and analysis of secure, high-quality eye health data relevant to current eye health priorities. RAAB7 replaces its predecessor (RAAB6) and provides enhanced functionality and greater efficiencies across multiple stages of the survey.

RAAB7 collects data relating to the two eye health indicators selected by the World Health Organization to monitor progress towards universal health coverage (effective Refractive Error Coverage and effective Cataract Surgical Coverage). It also includes an optional disability module using the Washington Group Short Set, a module endorsed by various United Nations agencies for disaggregation of Sustainable Development Goal indicators. RAAB7 has been developed in collaboration with the International Centre for Eye Health (ICEH).

## *School Eye Health Rapid Assessment (SEHRA)*

School Eye Health Rapid Assessment (SEHRA) is a new and innovative tool to aid planning and monitoring for school eye health programmes. SEHRA uses Peek software for data collection and automated analyses to help the people who plan, implement and monitor school eye health services to gain an accurate understanding of school-going children's eye health needs in their region and the capacity to meet those needs. This information can be used to plan and implement efficient school eye health programmes and to inform health campaigns and funding decisions. Development of SEHRA was generously funded by USAID.





# Peek-powered programmes

## *The problem Peek-powered programmes aim to solve*

The vast majority of people with an eye health need require a simple solution such as a pair of glasses or cataract surgery. So why do so many lack access to these simple, life-changing solutions?

Resources are scarce. Specialists are in short supply, conventional programmes can be inefficient, and performance data arrives too late. Many people do not know a solution exists or struggle to reach care. People who need eye health treatments remain invisible to health systems, unable to access the care they need.













## *Our solution*

Peek aids in powering programmes by taking the design of a program and translating that into a digitised care pathway, which means every encounter along the journey to care can be tracked. So when a person is screened in their home, school or community, they know where to go for care and providers are expecting them. The programme is designed to link into the wider, existing health system, and allows providers to focus on those not reaching care and continually improve the care pathways with and for those being left behind.



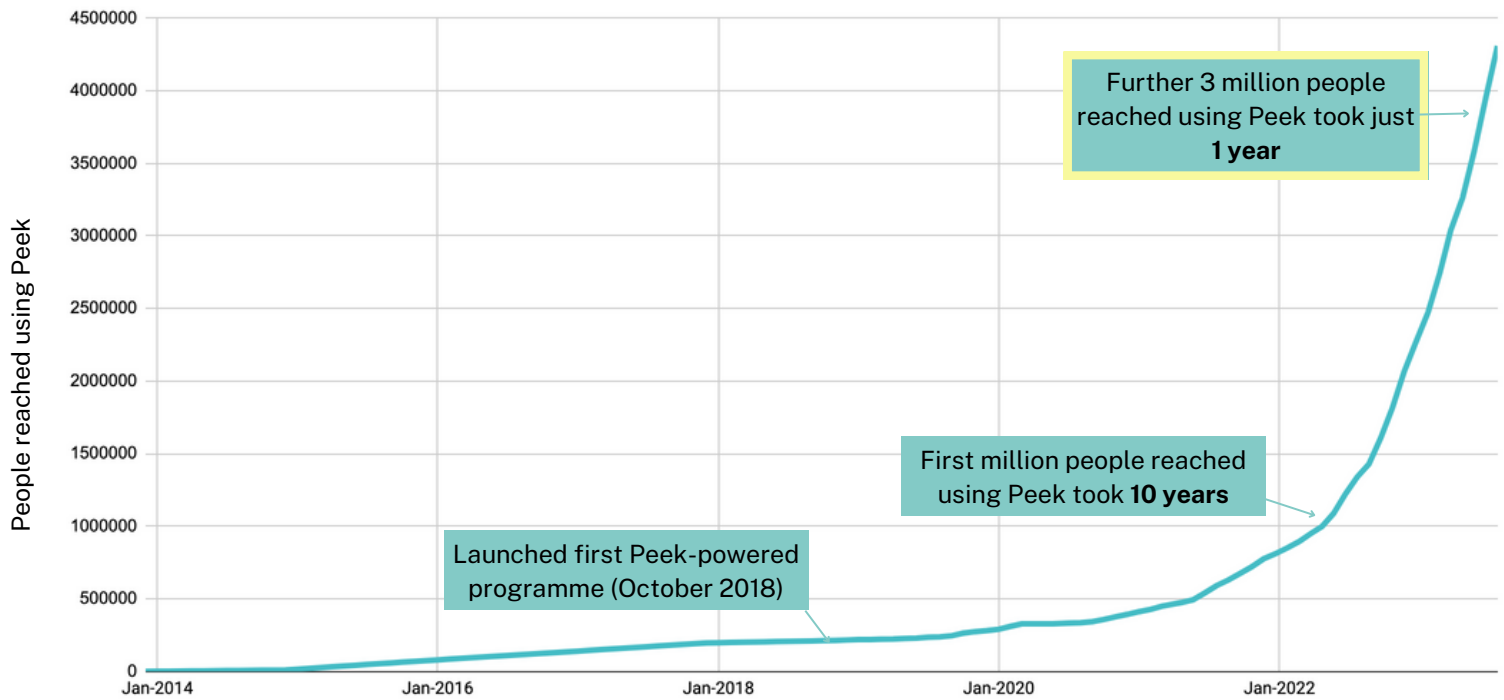
*Figure above: Mobile app enables screening by anyone, anywhere, as well as data capture at every stage of the journey. Data platform helps to monitor programmes and uncover barriers to care.*

## Peek-powered programme features

Software		
	Eye health screening	Our smartphone app, Peek Capture, with its clinically-validated vision test, allows task shifting of screening to health workers closer to the communities they serve, increasing screening coverage, improving service efficiency and facilitating programme equity.
	User management	With our Peek Admin web-based administration platform, programme managers control who accesses what data.
	Notifications	Programme managers and IT leads are provided with tailored alerts, directing them to where their attention is needed.
	SMS referral reminders	Our referral reminders tool allows Peek-powered programmes to drive greater adherence to referral by automatically contacting patients or their contacts via SMS, in their preferred language, as their appointment date approaches.
	Messaging optimisation	Our messaging platform introduces democratised optimisation tools, standard in the web-industry, to the eye care sector. These tools allow programmes to tailor their messaging to their specific audience and achieve better referral adherence in their setting.
	Up-to-date monitoring	Programme managers can view data in near real-time, allowing them to act quickly to resolve issues and lower barriers.
	Reports	Our software produces regular, in-depth reporting, configured to meet the needs of the individual Peek-powered programme.
	Workflow configuration	Our software is highly configurable, capable of matching the unique practitioner workflows and patient pathways of every Peek-powered programme.
	Data Security	We are industry leaders in applying data security and privacy to digital health in The Global South. We employ leading industry standards in our approach, keeping your data safe and secure.
Support Services		
	Programme Design Service	We offer a proven solution built on rigorous scientific evidence and a comprehensive approach that supports programmes from planning through evaluation.
	Software user training	Our training and support team utilise a blend of self-directed and instructor-led training to achieve rapid software user proficiency.
	Data Insights Service	We provide unparalleled visibility of programme operation, highlighting opportunities to improve efficiency and equity.

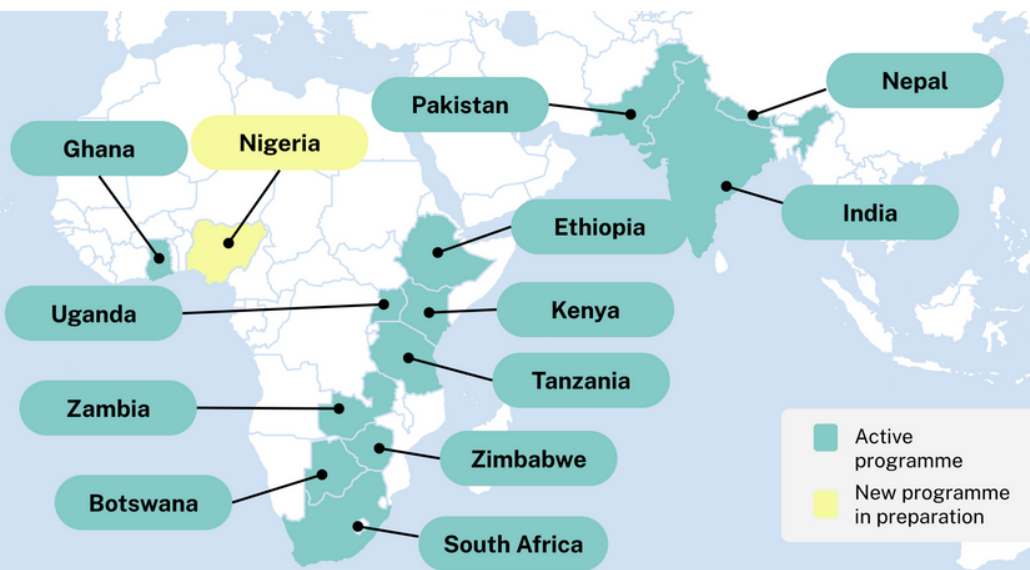


# Our collective impact



As of June 2023, Peek is powering 50 programmes across 12 countries with several programme and implementing partners. Our anchor partner, CBM Christian Blind Mission, who started using Peek in 2018, continues to set an excellent example of what can be achieved when embracing an evidence-based approach.

It took ten years (2012-2022) to screen one million people using Peek and just over one year to reach an additional three million people. Collectively each month our partners' Peek-powered programmes reach over 300,000 people. Most importantly, of those screened around 20% are identified as having an unmet eye health need and around 40,000 are connected to care each month.



## Programme partners





*Using Peek, CBM  
connected **16x**  
more people to  
care at **6x lower**  
cost*

## *Improving supply and demand for eye health*

Peek's software and data intelligence platform is designed to help programme providers increase the supply and demand for eye health. We aim to help eye health services create more equitable, efficient, and effective services. Through Peek's data intelligence platform and analysis service, programme providers can gain an understanding of a myriad of data points across the programme which aims to uncover barriers to care. These include (but are not limited to):

- **Programme coverage:** Number of facilities connected into the programme and people screened against the target population.
- **Patient adherence:** Adherence of patients across multiple demographics (e.g. gender, age) and locations (e.g. triage, specialist services). Time taken to reach each referral point.
- **Eye health needs:** Most common eye conditions identified and where they are being treated.
- **Resources used:** Medications, spectacles and other treatments prescribed and dispensed.
- **Screening and location activity:** Screening performance and location activity rates.

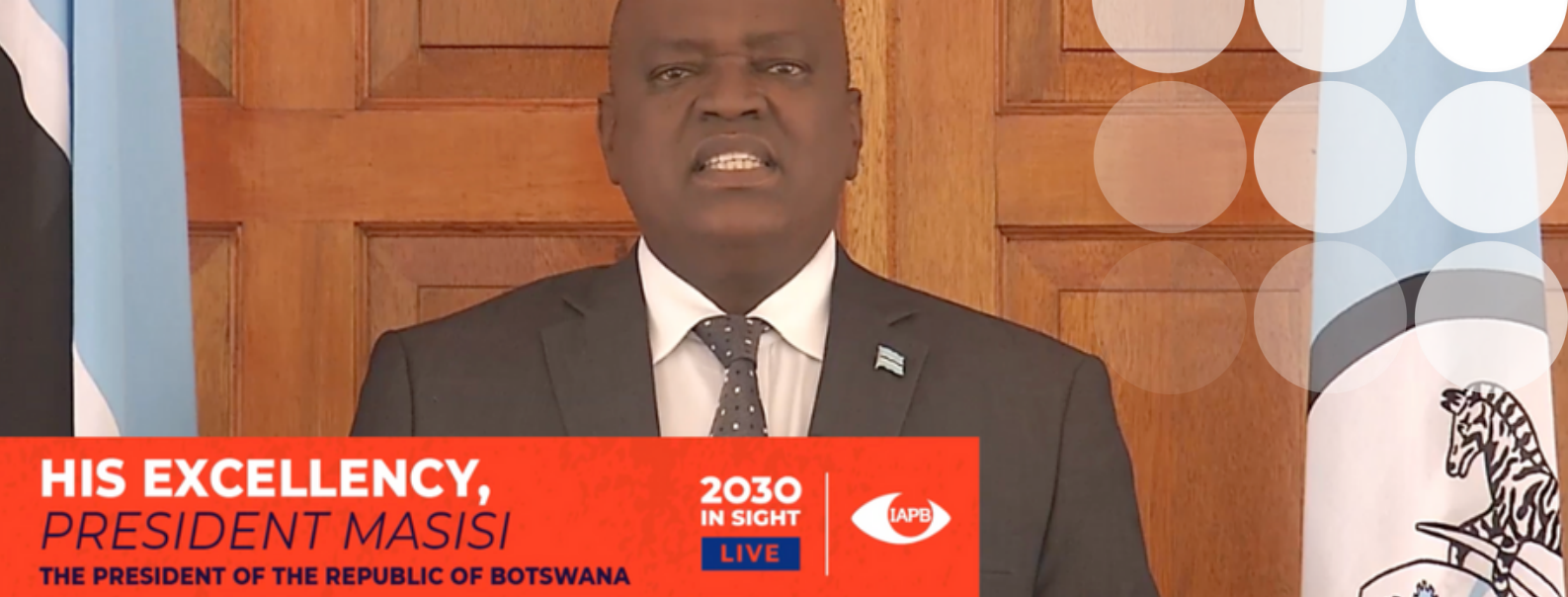
Together these data points help providers to get a full understanding of where their programme challenges are. They can then focus on improving barriers to care and use the data insights to monitor if efforts to improve have been successful.

In 2022, together with CBM we commissioned a return on investment analysis facilitated by an independent health economist to compare CBM's Peek versus non-Peek powered programmes in four districts of Pakistan. The Peek-powered programmes were demonstrated to:

- Reach 2.5x more people.
- **Connect 16x** more people to the treatment they need.
- **6x lower cost** per completed referral.

These types of programme improvements are happening across every Peek-powered programme on a regular basis.





## *Strengthening health systems*

Our technology presents a unique opportunity to link eye health into wider systems and to collaborate to achieve better eye health for all.

- We work **within existing systems** and do not seek to replace programme delivery processes that are already in place.
- We seek only partners who can **deliver at scale** and across the full pathway to care.
- We help to optimise and accelerate eye health screening and referral pathways through an entire system to **increase efficiency and equity of care**.
- Our software enables facilities from door to door screening and schools all the way to specialist hospitals to be **linked up** and patient journeys to be tracked.
- We take a **robust approach to data security** and processing which has led to significant data processing agreements with national governments.
- We are enabling **government adoption** through use of programme data for advocacy.
- We are developing the ability to **integrate** with health management information systems, such as DHIS2 and the ability to easily report on WHO indicators for eye health.

Our successes here so far include:

1. A **national government-level contract** in Botswana to screen and treat every schoolchild in the country. Since its launch the programme has screened almost 70,000 children. President Masisi is now a global champion for child eye health for the International Agency for the Prevention of Blindness (IAPB).
2. A large-scale (8 million people target population) programme in Kenya led by CBM, and the Ministry of Health, which has already reached more than 1,000,000 people in 11 months. This was enabled by the signing of a **national level data processing assurance agreement** with the Kenyan government and Peek Vision.
3. In Pakistan, a multi-provincial programme led by CBM reaches over 100,000 people monthly connecting households through 1,790 Lady Health Workers and 2,672 Schools to over 130 health access points. The Sindh provincial government committed to fund CBM's local implementing partner, SIOVS, to scale-up Peek-powered CBM programmes in three new districts in 2022-2023 (an investment of approximately €300,000) and are looking to fund further expansion to more districts in future years.



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If you are interested in learning more about Peek Vision  
please get in touch: [enquiries@peekvision.org](mailto:enquiries@peekvision.org)

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