

FLETCHER D-PRIZE COMPETITION

2024-25 Academic Year

Livelihoods Challenges

Sell reading glasses, reading spectacles, or near-vision glasses in hard-to-reach communities

We challenge you to design a new social enterprise that distributes non-prescription reading/working glasses to those in need. Millions of people over 40 lack access to simple reading glasses. This limits their earning potential and overall quality of life.

Fletcher D-Prize will award up to \$20,000 to anyone with a new plan to mobilize retail networks to reach underserved communities in low- and middle-income countries. This award is meant to support your initial test of a social enterprise on a small scale. You should have a vision to grow your enterprise to reach at least 100,000 people within five years, and eventually grow nation-wide.¹

The Problem

As people age, their eyes naturally lose the ability to focus up close. This part of aging can start around age 40. Then it gets progressively worse. The medical term is presbyopia.

Uncorrected presbyopia harms people's quality of life and productivity. A recent study finds that 80% of patients with uncorrected presbyopia have difficulty performing near-vision-related tasks, like reading and sewing. This corresponds with a 22% decrease in quality of life.² Presbyopia also decreases worker productivity. Recent trials show that correcting presbyopia can lead to a

¹ This call to action launched in partnership with the [Livelihood Impact Fund Eyeglass Initiative](#)

² Berdahl, John, et al. "Patient and economic burden of presbyopia: a systematic literature review." *Clinical Ophthalmology* (2020): 3439-3450.

22% increase in relative productivity,³ and a 33% increase in income.⁴ Global annual productivity losses from uncorrected presbyopia are estimated to be \$367 billion USD.²

Reading glasses are a simple, affordable, and universally-accepted solution. They may be referred to as reading spectacles or near-vision glasses. They change the distance at which objects are in focus so that close objects (like mobile phones) can be seen clearly. They tend to cost a few dollars and shouldn't require a prescription. Reading glasses are different from prescription glasses, which correct different vision issues.

Unfortunately, 826 million people with presbyopia don't have access to basic reading glasses.⁵ The problem is most prevalent in sub-Saharan Africa and Southeast Asia. The situation is set to get worse. 866 million people are projected to have uncorrected presbyopia by 2050.

Why are reading glasses unavailable to so many people? A root problem is that access is extremely limited in many low- and middle-income countries. Readers are often only available in their largest capital cities.

Additionally, in some settings, reading glasses are only available by visiting a healthcare worker and getting a prescription. This can be inconvenient, and expensive. Oftentimes, a prescription shouldn't be needed to buy simple reading glasses. As a comparison, in high-income countries, reading glasses are for sale at every pharmacy, supermarket, and corner store. Customers don't require a medical visit, prescription, or screening by a trained provider. And this isn't a new market - reading glasses have been available over the counter for over 40 years.

The Proven Intervention

Two factors have made reading glasses universally accessible in other countries.

First, reading glasses are positioned as an over-the-counter product without risk. This positioning is critical: when readers are seen as a medical product, only medical professionals sell them. Worse, consumers assume the product as expensive and inconvenient, and even if they need help with their vision they become reluctant to purchase. The better solution is to "demedicalize" reading glasses. This means teaching consumers that the product can help them with near-vision tasks and that it is low-risk and affordable.

Second, reading glasses are made broadly available through a range of retail options. Today, customers in low- and middle-income countries who live in large cities might be able to buy

³ Reddy, Priya Adhishesha, et al. "Effect of providing near glasses on productivity among rural Indian tea workers with presbyopia (PROSPER): a randomized trial." *The Lancet Global Health* 6.9 (2018): e1019-e1027.

⁴ Sehrin, Farzana, et al. "The effect on income of providing near vision correction to workers in Bangladesh: The THRIVE (Tradespeople and Hand-workers Rural Initiative for a Vision-enhanced Economy) randomized controlled trial." *Plos one* 19.4 (2024): e0296115.

⁵ <https://pubmed.ncbi.nlm.nih.gov/29753495>

readers. But those in many other markets (like mid-sized cities, peri-urban areas, and rural areas) simply don't have anywhere to make a quality purchase at an affordable price. We believe the right entrepreneur could act on this open space and build a large and profitable business.⁶

Your Distribution Challenge

We will award a startup grant of up to \$20,000 to an entrepreneur team that builds a new social enterprise distributing reading glasses. You should target consumers who are over 40 years of age and living in the most underserved peri-urban or rural communities.

A successful organization will sell readers through a retail setting (such as through private pharmacies, retail shops, or any other network). You should not rely on hospital or ophthalmologist/ optometrist networks. Readers should be at an affordable price for consumers and still earn a profit for the seller.

You must have a big vision. We wish to support entrepreneurs who can build a social enterprise that reaches at least 100,000 customers within 5 years and eventually grows into a national or multinational scale. Our award is meant to be a first step toward this vision so that you can test your idea on a small scale.

Getting Started on Designing Your Social Enterprise

1. Select a quality product

Selling a good quality product is important. Fortunately, well-made readers are widely available. A few options:

- Option 1: D-Prize may be able to provide inventory in-kind as part of the startup award. This is location-dependent. We can explore this option for any entrepreneur interested.
- Option 2: we can recommend and link entrepreneurs directly with suppliers in our network that can mail high-quality products to you at a low price.

⁶ Remarks on the factors making eyeglass expansion possible are largely informed by two reports prepared by Appleseed, a behavioral agency. The reports relate to the Ghanaian (Ashanti region) and Kenyan (Kisumu, Mombasa, and Nairobi) markets. While findings may not perfectly translate to other markets, we believe these insights provide a starting point for entrepreneurs.

Other sources that inform our thinking:

- Teyssier, Baptiste, et al. "Uncovering and Capturing Demand for Eyeglasses at Pharmacies in Ghana." 2023.
- Teyssier, Baptiste, et al. "Behavioral Factors to Influence People to Seek Readers at Pharmacies in Kenya." 2023.

- Option 3: you can select your own manufacturer that produces a quality product. The International Agency for the Prevention of Blindness publishes [this list of quality suppliers](#) that meet [international quality standards](#).

II. Choose a market

You should check that government regulations in your country of operation allow for the sale of reading glasses. We've put together a rough summary of regulations per country [here](#).

Within your country, we recommend focusing on *peri-urban markets where the need is high*:

- There are fewer retail options in peri-urban areas than there are in urban areas, so targeting peri-urban markets means you will have more impact and less competition.
- Rural areas also have large unmet needs, but building a financially successful business in these markets is more difficult. The density of potential customers is smaller, so market testing and distribution are more expensive. If you choose to focus on rural areas, you should have a convincing plan for how you will remain profitable.

Within your market, we encourage you to broadly target the following customer profile:

- 40 years and older.⁷
- Low/medium income customers, and/or customers who are otherwise likely to be excluded from existing distribution channels.
- We recommend avoiding hyper-targeting, such as targeting people in one specific job or profession. We've learned from past programs that hyper-targeting can exclude other potential customers who would have otherwise benefited from access to readers.

Warning: ready-made reading glasses must not be sold for use by children. Children require thorough refractive assessment by a trained professional.

III. Build a retail network

We believe designing a plan to mobilize sales is one of the most important parts of this challenge.

To begin, we encourage entrepreneurs to select an existing network to activate. The network serves as the physical location where readers are sold. Here are just a few ideas:

- Private pharmacies
- Private health clinics
- Community health worker networks
- Retail or mobile money shops
- Churches

⁷ The need for reading glasses often starts around age 40, though presbyopia can start as young as 35.

- Community meetings
- Savings groups
- Micro entrepreneurs
- Door-to-door sales
- Workplace eye screenings
- Selling to teachers/parents in school
- Selling to urban workers to send back home to their rural families
- ... any other idea you have

Next, we encourage entrepreneurs to think through what will motivate and what will block the sellers in this network from making sales. The solution you pitch to us should leverage those motivators, and solve for those blockers. Here are some we already know exist:

Motivators for sellers

Profitability: Most of the people working in the distribution network will expect a profit. We imagine entrepreneurs might experiment. What profit margin is motivating?⁸ And are there other pricing frameworks that are motivating? For instance, you might consider a model that only asks sellers to put a small amount of cash down for inventory. Or another idea: sellers might be interested in bundling readers with other products.

Growing customer base: Marketing new products like reading glasses can get more foot traffic into a seller's shop. Customers who buy readers also can turn into repeat sales: research suggests that once people buy their first pair, they are open to buying a second, and typically will spend up to 40% more on their second pair. How might you use this to motivate sellers?

The desire to be helpful: Pharmacy assistants, community health workers, and many other actors in the distribution network are naturally motivated to help. How can you use this? For instance, you might try to raise the seller's awareness that they are doing good by addressing uncorrected presbyopia.

Blockers for sellers

Unease with the product: Sellers may have concerns they are breaking the law by selling reading glasses. They might also worry the product will harm customers. We imagine entrepreneurs testing different seller training programs to solve this. What works best? Is it cost-effective?

⁸ Anecdotal evidence suggests sellers may be motivated to make sales when they earn a 30% margin.

Staff struggle with the sales process: Selling readers usually involves a few steps. In a perfect world, staff would complete a 1-2 hour training program and learn how to perform those steps. In reality, they often graduate from training and still lack consistency and quality.

You should design solutions. You might take an existing training program and think through ways to ensure staff members complete it correctly. (For instance, Restoring Vision offers a training program that we can provide). Alternatively, you could design a new training program that teaches the below steps in a different way. Steps in the current training:

- *Staff are taught how to give customers a simple eye test.* The tests have customers read [words or symbols](#) that get smaller and smaller each line. It usually takes 1-2 minutes. A test is an important step: it checks that customers actually need glasses, and identifies the correct strength of glasses they need. Tests also make customers feel at ease, and customers in new markets rarely make a first purchase without some sort of testing.

You might design a way to ensure staff know how to give these tests properly and consistently. Or, you may design a new way to conduct eye tests that don't require staff at all. As one idea, customers could self-screen using an eye test in the store, or even at home on their mobile phone. ([Peek Vision](#) and [WHOeyes](#) both offer free apps). We are excited for you to innovate here.

- *Staff are trained to provide directions on when to use / not use glasses, and how to care for them.* After a customer tries on and buys their new pair of reading glasses, they need a little guidance. Customers should be taught when to use reading glasses, and when not to. Reading glasses can help with any task that requires seeing up close (like using a mobile phone). They should not be worn for distance vision (like driving), and will not correct other eye problems.

You might consider designing for this. How might you ensure the staff are properly teaching customers? Or, could you design a way to teach customers without having staff involved, such as providing customers with written or digital messages post-purchase?

- *Staff are trained to refer customers with more serious eye conditions to an eye clinic.* You should make sure that the process of spotting customers with more serious conditions and referring them to clinics consistently works.

Mismatched incentives: Shop owners are incentivized to sell reading glasses to earn a profit. But what is the incentive for the in-store employee? Without an incentive, they may not want to learn about a new product or conduct a multi-step sales process.

Past pilots have set sales targets for in-store employees, but this has caused problems. Sometimes staff try to sell readers to people who don't otherwise need them just to hit sales

targets. You should consider designing an incentive that motivates shop employees without pushing them to sell to the wrong customer.

For more motivators and blockers, please see:

- [Behavioral Factors to Influence People to Seek Readers at Pharmacies in Kenya](#)
- [Uncovering and Capturing Demand for Eyeglasses at Pharmacies in Ghana](#)

IV. Market to customers / mobilize demand

Once your retail network is ready, you need a strategy to get customers in the door. Fortunately, some customers will be ready to purchase readers right away.

Latent demand first

Some customers already recognize their presbyopia. These customers could be mobilized by awareness campaigns. This could be in-person announcements (churches, farmer committees, community meetings, etc), print media, signs and flyers in shops, radio ads, mobile short codes - and any other way to announce that reading glasses are now for sale.

A successful entrepreneur will design around a few considerations:

Price sensitivity: Research suggests that customers are price sensitive. They want a quality product at an affordable price. You might consider how your distribution network can signal quality while still maintaining low prices.

Stigma: Research suggests that there is social pressure against wearing glasses in some peri-urban and rural areas (but not usually in urban areas). Wearers are sometimes perceived as trying to appear fashionable. This stigma isn't always a problem - especially if customers are older, don't need to wear the readers all of the time, and are clearly used in non-fashion-related situations (like working). You should assess whether there is a stigma against using readers in your specific setting, and if so, design for addressing it.

Annoying sales experience: Frustrated customers won't often buy reading glasses. For instance, an inconvenient process for eye testing can push customers away. So too can stock-outs, or other situations where customers aren't able to purchase readers right when they decide they want them. Upselling customers, or only marketing more expensive options, can push away sales. Your sales process should provide a positive customer experience.

Potential demand next

Eventually (perhaps during your pilot, or perhaps months later), you'll have served all the latent demand, and you'll need to activate a larger customer segment.

Fortunately, there are many people who genuinely would benefit from readers – they just need to trust the product and seller first. This segment could be mobilized by education campaigns. When you are ready to market to this segment, you may try a few ideas:

Educational messages that overturn common misconceptions: We've learned that some customers will think that readers are a risky medical product. Commonly, some people falsely believe that wearing readers makes one's eyesight worse over time, or that they can cause serious harm to their eyes if they aren't the right power. You might use educational advertising programs others have already designed, such as educational programs from [Restoring Vision](#) and [Livelihood Impact Fund](#).

Educational messages on the benefits: Research finds that many consumers don't know about the positive benefits readers can have on their job performance. They may also not see the benefits to their everyday life.⁹ Many have gotten used to having poor eyesight, and may even prefer in general to bear with inconveniences rather than trying to fix them at the source.

Messaging delivered by trusted people: Research has found that adult-aged children are good at convincing their elderly parents to consider glasses. In-person gatherings are another opportunity to teach people about reading glasses in a way they will trust.

Try-before-you-buy plans: Research suggests that once people receive a free test and try on glasses, a large portion of those people will go on to purchase them.

V: Measure your progress

D-Prize can share a list of common metrics used in the industry that help determine if your new social enterprise is cost-effective. Here's a starting point:

Retail channels

- Number of retail or delivery points (e.g., churches, pharmacies, etc.)
- Number of staff/people trained to give eye tests and sell glasses (assuming your plan involves a training program)
- Attrition rate/percentage of retail or delivery shops that were trained to sell reading glasses but have since stopped

Customer acquisition metrics

- Number of messages delivered to bolster demand (e.g., announcements at churches) and how many people were reached by those messages, if applicable.
- Number of people screened for reading glasses, and results of those tests
- Number of people who buy readers

⁹ Research finds that the primary reason many people want reading glasses is so they may read their Bible, and/or follow along with hymns in church.

- Number of people purchasing their first pair versus second pair

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Questions? Email Kaushik Chaudhuri at Kaushik.Chaudhuri@tufts.edu.