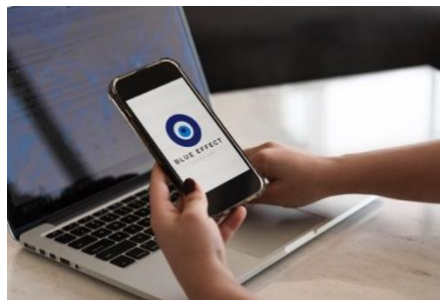




Master in business administration (MBA)

Testing blue light protection products in Mexican optical stores: viability and acceptance



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Executive summary

This study evaluates the viability of introducing blue light screen protectors and glasses into optical stores in the Mexican market to address the prevalent issue of digital eye strain caused by prolonged exposure to digital devices.

The business plan is divided into two phases. The initial phase involves a pilot test to determine the feasibility and success of presenting blue light screen protectors and glasses, imported from Alibaba, in optical stores in the Mexican state of Nuevo Leon. The subsequent phase implicates an expansion strategy within the state, entailing the importation of a larger quantity of products for distribution in optical stores. Key objectives include determining the target number of optical stores and selecting the municipalities within Nuevo Leon for product implementation.

Profitability is expected from the first year of operations. In the inaugural year, it is projected to sell a total of 2090 units, yielding a net income of \$17,611. The proposed initial financial investment for the pilot test phase is projected to be \$385, covering shipping, procurement, handling, and marketing costs. The pilot test is projected to generate a net income of \$2,162, with future sales and net income expected to grow appreciably, reaching \$147,285 and \$64,434, respectively, by 2029. The project is estimated to be financed primarily through equity.

The first segment of this report offers an in-depth examination of blue light and its potential adverse effects, mainly in relation to digital eye strain symptoms. Successively, an investigation of blue light sector industry and a broad overview of the Mexican market are provided, concluding with the validation of the business's potential viability within Mexican optical stores.

Key words: blue light, eye health, optical stores, digital eye strain symptoms, digital devices.

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1. Introduction

In 2020, the World Health Organization (WHO) officially acknowledged addiction to digital technology connected devices as a global problem. (Hutt, Axel; Dresch-Langley, Birgitta, 2022) Sleep quality and eye self-care are vital global health matters and combined with a prolonged screen time, may represent a challenge. According to the Vision Council report, *Eyes overexposed: The Digital Device Dilemma*, a survey performed to more than 10,000 American adults, 65% of them report facing symptoms of digital eye strain and 60% of them use their digital devices for five or more hours each day. (The Vision Council, 2016, p. 2.)

Nowadays we're in constant exposure to technology and this has clearly made an impact on our eyes. Our normal day involves spending hours working in our computer screens and at the same time switching to look at another screen – a tablet, television, mobile smartphone, creating a pattern in our routine. Statistics suggest that electronic devices usage has been increasing rapidly, raising health concerns. According to recent data, the average person spends six hours and fifty-eight minutes per day connected to screens. (Exploding Topics, 2023) We've formed and evolved within a "stay connected" system which has been proved that has affected the direct contact part (in this case our eyes), influence our cardiac rhythm and melatonin secretion. After COVID-19 pandemic, we had to adapt to an environment where working remotely, learning, and socializing online, has become the new normal. The changes in the way we live, work, and learn have led us to a necessity to rapidly readjust to this advanced digital era and become more dependent to our electronic devices.

We can hardly imagine people's lives without using digital devices. Yes, computers, tablets, and smartphones serve as excellent tools for studying, communicating, working and entertainment, however, the problem is people hardly ever realize the possible negative health outcomes resulting by the excessive consumption of electronic screens. Our eyes are not made for staring at digital screens all day, yet the demands of our modern world day to day regularly place us in front of a computer, somehow working from our smartphones and reading from our tablets. We're living with fatigue, tired and dry eyes, and constant headaches as we're becoming more progressively digitized since more of our hobbies and tasks are being online. This constant exposure to technology affects our eyes and causes over time visual discomfort. Visual discomfort equals stress, strain and other physical pains which represent the most common symptoms of digital eye strain, characterized by irritated and/or dry eyes, blurred vision, neck, and back pain. Blue light consumption also disturbs the sleep habits by suppressing melatonin and altering the body's cardiac rhythm.

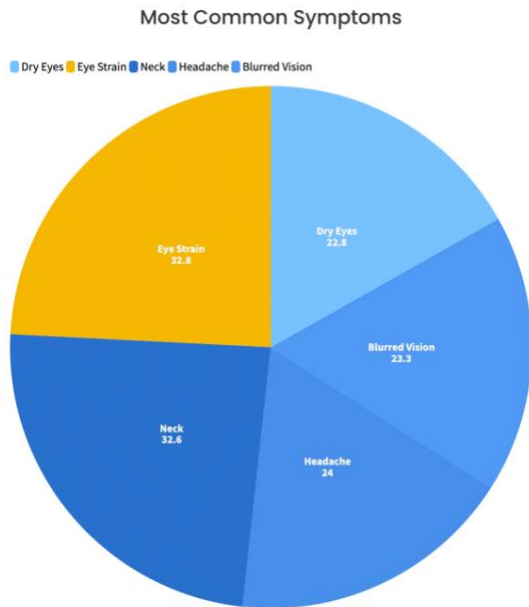


Figure 1: Digital eye strain most common symptoms. Source: WantLens

According to the Sleep Health Journal, which analyzes the role of sleep-in population health, using the night shift feature on an iPhone may help improve the sleep quality and decrease the amount of blue light emitted, however, same study also remarks that this is not a guaranteed solution for sleeping disturbances.

According to Dr. Guillermo Chapa, ophthalmologist in the state of Nuevo León, it is wrongly believed that blue light damages the ocular structures, specifically the retina, however, recent studies by the American Academy of Ophthalmology, which is a world reference in the profession, describes that the exposure to blue light does not produce structural damage to the eyeball but causes humans to blink less sometimes and cause a dryness sensation and lubricating the eye less than usual. This condition is what we know today as eye fatigue. (Chapa Garza, Guillermo, 2023.)

2. Business idea

Blue Effect introduces a line of blue light screen protection for electronic devices (iPhone, iPad, laptop) and eyewear collections, featuring both prescription and non-prescription options. Our products are designed with a focus on eye health, intending to filter high-energy visible (HEV) light effectively. Our ultimate mission is to combat digital eye strain, promote better sleep, and improve overall well-being. By incorporating advanced technology, including sustainable biodegradable coatings such as plant-based options, we sustain a commitment to environmental responsibility. Moreover, our recent shift towards sustainable packaging, using recycled cardboard and paper instead of plastic, aligns with our enthusiasm to eco-conscious practices.

The primary objective of this study is to evaluate the achievability and market acceptance of blue light screen protectors for electronic devices and blue light glasses within optical stores in Nuevo León, México.

Our execution strategy comprises two stages: an initial three-month pilot test including the sale of imported blue light products from Alibaba in three selected optical stores, followed by a stronger rollout across approximately 800 optical stores in the state. To gather ample and valuable insights, we conducted a phone interview with a local ophthalmologist to understand the competitive advantages of incorporating blue light products into the optical industry. Additionally, we employed quantitative methods to collect and analyze numerical data collected from a sample demographic primarily aged between 22 and 28, shedding light on blue light awareness and its repercussions.

Our target market covers individuals who spend extended periods in front of screens, including professionals, adolescents, students, young adults, gamers and simply those experiencing digital eye strain symptoms.

The business model defines as follows, Blue Effect characterizes itself from competitors by positioning its products within the healthcare sector, collaborating with optical stores in Nuevo León to certify and offer medically tested solutions. This partnership ensures consumer trust and confidence in the effectiveness of our products.

<p>Key partners</p> <ul style="list-style-type: none"> Optical stores Manufacturers: Suppliers of blue light accessories Materials & technology providers to produce blue light accessories. Marketing agencies Logistics 	<p>Key activities</p> <ul style="list-style-type: none"> Product development (R&D) Distribution & selling Marketing & promotion Supplier selection Customer support Manufacturing process 	<p>Value proposition</p> <p>Providing high-quality and advanced technology blue light screen protectors and glasses to protect your vision from the harmful effects emitted by digital screens and reduce digital eye strain symptoms.</p>	<p>Customer relationships</p> <ul style="list-style-type: none"> Advantage of the optics' existing customer base → In-store consults & assistance. Online support: Provide eye health content. Community engagement of blue light awareness. 	<p>Customer segments</p> <ul style="list-style-type: none"> Students Work officers Professionals Gamers Individuals concerned with eye health Businesses Institutions Parents
<p>Channels</p> <ul style="list-style-type: none"> Optical stores Online stores Social media Educational workshops 	<p>Key resources</p> <ul style="list-style-type: none"> Advanced technology & equipment for manufacturing. Distribution network (partnerships) Product inventory HR(skilled workforce) 			
<p>Cost structure</p> <p>Costs include the research and development, manufacturing, marketing, distribution and transportation, shipping costs, and other overhead costs like rent and salaries.</p>		<p>Revenue streams</p> <p>Revenue generated directly from the sale of blue light screen protectors and glasses in optical stores.</p>		

Figure 2: Business Model Canvas. Source: Own elaboration.

3. What is blue light?

Blue light represents approximately one-third of visible light, falling within the high-energy visible (HEV) spectrum perceptible to the human eye. It is a component of the electromagnetic spectrum, categorized by a varying wavelength measure in nanometers (nm). Shorter wavelengths associate with higher energy levels. The electromagnetic spectrum contains diverse types of light waves, including gamma rays, x-rays, ultraviolet (UV) rays, infrared light, visible light, and radio waves.

The human eye is principally sensitive and more easily harmed to visible light, which includes a range of colors like blue, green, violet, orange, yellow, and red. These colors are present-day in natural sunlight and released by digital devices such as smartphones, tablets, computers, and televisions, as well as artificial sources like fluorescent and LED lights. Blue light, with wavelengths ranging from 380 to 500 nm, is significant for its short wavelength and high energy output.

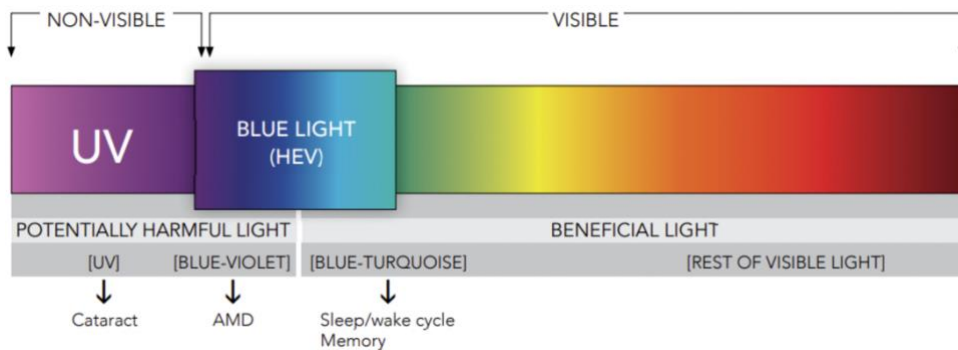


Figure 3: Electromagnetic spectrum that the human eye can see and not see. Source: WantLens.

Unlike UV rays, which are partly filtered by the eye, blue light penetrates the eye easily and can reach the retina, potentially causing retinal damage through photochemical reactions. Research published by the National Library of Medicine, implies that prolonged exposure to blue light, especially at night, may disrupt sleep cycles and contribute to retinal cell damage. (Zhi-Chun Zhao, Ying Zhou, Gang Tan, Juan Li, 2018.)

While not all blue light is harmful, it's concerning that humans lack natural defenses against its potential unfavorable effects. This positions us humans in a powerless place except if we take safety measures against it. Protective measures, such as using blue light filtering products, are recommended, particularly in situations of prolonged exposure.

In summary, learning and understanding the properties and outcomes of blue light is fundamental for justifying potential risks and safeguarding eye health in an era controlled by digital technology.

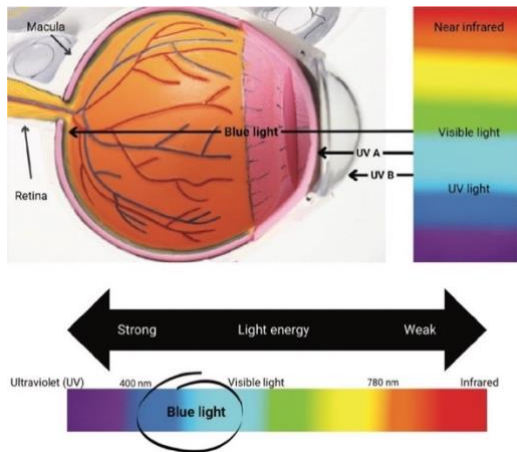


Figure 4: Blue light is the most harmful to the retina cells. Source: Own elaboration.

4. Market research

4.1 Sector analysis

Author Josh Howarth, in his analysis on Exploding Topics, reveals a meaningful uptick in daily screen time on a global scale, with a 13% increase (equivalent to 49 minutes) since 2013. Remarkably, the top ten countries with the utmost screen time usage, as shown in Figure 4 using statistical data from Exploding Topics, are historically linked with elevated screen consumption. Factors such as internet penetration, smartphone adoption, and cultural habits are among the key influencers affecting screen time usage trends.

TOP 10 COUNTRIES MOST ACTIVE SCREEN TIME USERS					
Country	Total screen time	Mobile screen time	%	Computer screen time	%
South Africa	10 hrs, 46 min	5 hrs, 9 min	48%	5 hrs, 37 min	52%
Philippines	10 hrs, 27 min	5 hrs, 47 min	55%	4 hrs, 40 min	45%
Brazil	10 hrs, 19 min	5 hrs, 25 min	53%	4 hrs, 54 min	47%
Colombia	10 hrs, 3 min	5 hrs, 9 min	51%	4 hrs, 54 min	49%
Argentina	9 hrs, 38 min	5 hrs, 4 min	53%	4 hrs, 34 min	47%
Malaysia	9 hrs, 10 min	4 hrs, 49 min	53%	4 hrs, 21 min	47%
Thailand	9 hrs, 6 min	5 hrs, 28 min	60%	3 hrs, 38 min	40%
Mexico	8 hrs, 55 min	4 hrs, 37 min	52%	4 hrs, 18 min	48%
Indonesia	8 hrs, 37 min	4 hrs, 56 min	57%	3 hrs, 41 min	43%
UAE	8 hrs, 36 min	4 hrs, 35 min	53%	4 hrs, 1 min	47%

Table 1: Top 10 countries most active screen time users. Source: Exploding Topics.

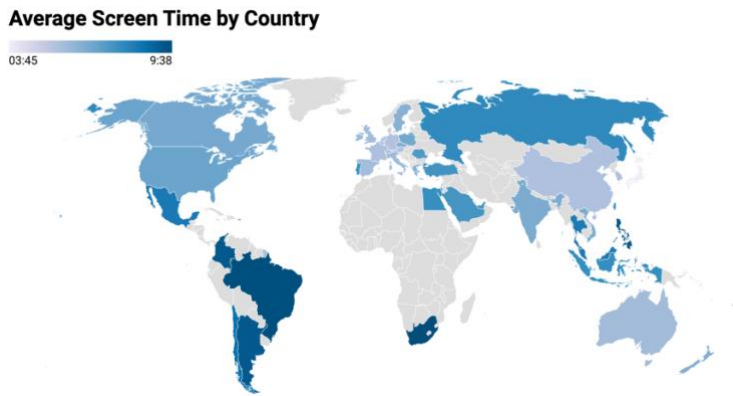


Figure 5: Average Screen Time by Country. Source: CompariTech.

The global market for blue light filter products has experienced substantial growth, reaching a value of USD 1.2 billion in 2020, and is projected to achieve USD 2.9 billion by 2028, boasting a strong CAGR of 12.5% during the forecast period from 2021 to 2028 (Zion Market Research, 2023). Likewise, the blue light blocking glasses market has shown notable growth, starting from a value of USD 21.9 million in 2019 and expected to maintain a compound annual growth rate (CAGR) of 16.6% from 2020 to 2027, according to a report by Grand View Research.

The market for blue light filter products comprises several solutions, including screen protectors, glasses, and software applications. With the rising demand for smartphones and tablets, clearly screen protectors dominate the market, claiming a considerable 50% share (Grand View Research, 2023). Markedly, North America appeared as the leading regional market for blue light blocking glasses in 2020, taking over 35% of the global market share.

An article by Lund, Nielsen, Danielsen, and Andersen published in BMC Public Health in 2021 highlights the correlation between social media use sleep patterns among children and adolescents in western countries. The findings suggest associations between electronic media usage, delayed bedtime, and poor sleep quality among children aged 6-12 and 13-15. (Lund, L., Nielsen, I., Danielsen, D., Andersen, S., 2021.)

In conducting market research within the blue light industry, macro-level insights will be assessed to estimate the potential partnership opportunities with optical stores in Nuevo León, considering as potential distribution channels.

4.2 Blue light industry in Mexico

The average Mexican spends 8.07 hours looking at a screen every day (Data Reportal, 2023), indicating a generous reliance on electronic devices. Despite being an emerging industry, the blue light sector in Mexico is poised for a substantial growth in the coming years. Although the market for blue light screen protectors and glasses is currently divided, increasing awareness of the health risks associated with

prolonged screen time suggests encouraging prospects for expansion. Mexico grants an attractive market for companies operating in this space, given its extensive population and the growing number of smartphone and electronic device users, which accounted for approximately 82.9 million individuals (62% of the total population) in 2021 (Statista, 2023.)

A deeper examination reveals a prospering eyewear market in Mexico, with total revenue reaching \$1.64 billion USD in 2022, and projections indicating continual growth (Statista, 2023). Eyewear frame sales have been on the rise since 2020, with 92.36 million pieces sold in 2022 (Statista, 2023), highlighting the population’s collective demand for vision care products and services.

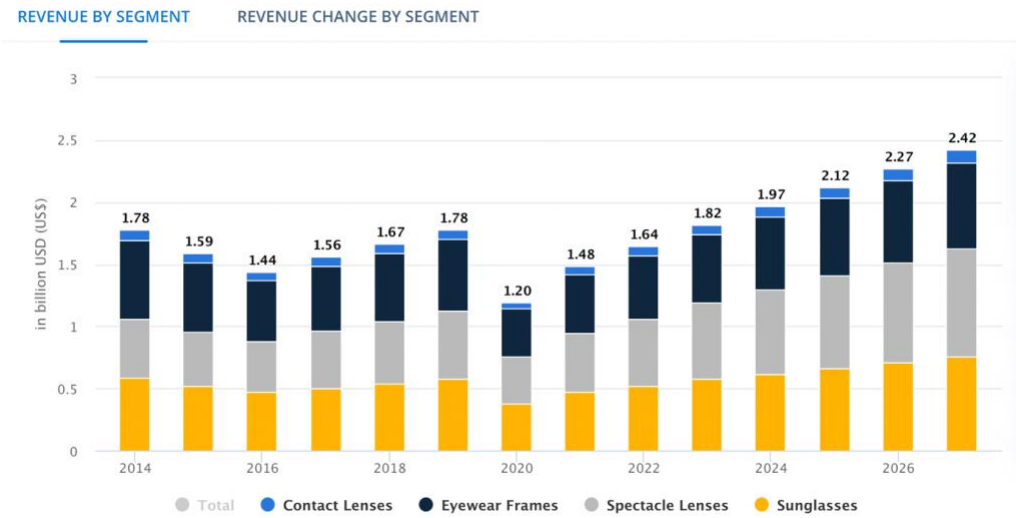


Figure 6: Eyewear revenue by segment in México. Source: Statista.

In terms on mobile device usage, the mobile vendor market share in México from April 2022 to April 2023 has grown from 18.42% to 22.74%, being a leading brand above Huawei, Xiaomi and Oppo and being in second place after number one brand Samsung. Apple has demonstrated constant growth in the market share in the country, Mexicans keep choosing Apple as their final purchase decision when it comes to smartphones.

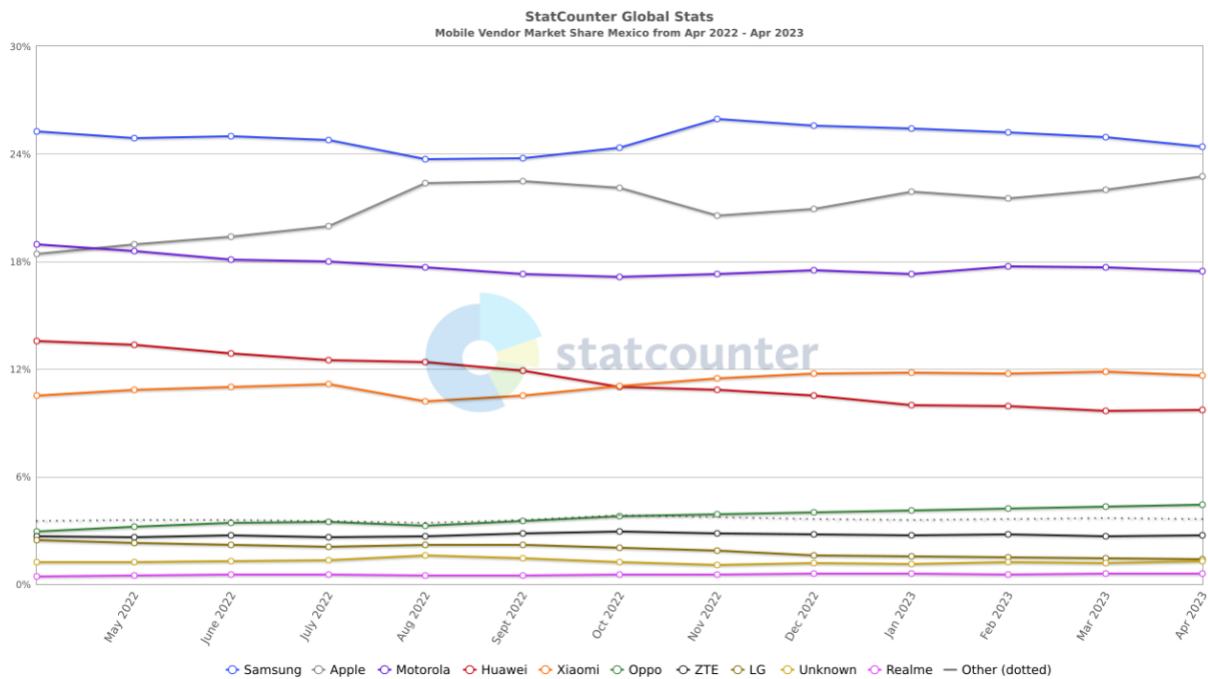


Figure 7: Mobile Vendor Market Share México Apr 2022 - Apr 2023. Source: StatCounter.

Nuevo Leon, one of Mexico’s largest states with a population of 5,784,442 according to INEGI, possesses a robust healthcare infrastructure and skilled professionals, making it beneficial to the delivery of quality eye care services. The state is home to approximately 800 optical stores out of the estimated 11,000 nationwide (Rodriguez, Francelia, 2021), indicating ample opportunities for the distribution of blue light protection products.

Recent study published by USC Annenberg School for Communication and Journalism from the University of Southern California, published an article on the prevalence of screen addiction among Mexican teens. Part of the study includes a survey performed to more than 1,200 Mexican teens and parents and it was found that 45% of Mexican teens feel they spend too much time on their mobile devices, half of them admit feeling addicted, and 77% say they feel distracted daily by their mobile devices (USC University of Southern California, 2019). This phenomenon emphasizes the need for effective solutions to lessen the negative effects of prolonged screen exposure in Mexican society.

Besides, according to the survey, four out of five Mexican parents agree that their teens are indeed distracted by their electronic devices every day and almost two thirds feel they spend too much time on their electronic devices. (USC University of Southern California, 2019.) Another important insight is that México a 45% of teens say they spend too much time on their mobile phones, contrasted with 39% teens in the US, 32% in the U.K. and 17% in Japan. (USC University of Southern California, 2019.)

5. Industry analysis and competitive landscape

It is important to note that even though this study intention is for being implemented in México, there are some elements included in the frameworks analyzed from a global perspective due to the international elements involved.

5.1 PESTEL analysis

Political

Government regulations and policies regarding the sale and import of blue light accessories, particularly for products imported from China to Mexico, are crucial considerations. Trade agreements and tariffs between the two countries can considerably impact the accessibility and cost of importing blue light screen protectors and glasses. Any diplomatic tensions between Mexico and China could complicate negotiations and affect the project's feasibility. Moreover, adherence to consumer protection laws, all-embracing product safety regulations, advertising, labeling, and import/customs regulations, is essential.

Economic

Some economic factors may influence the implementation's pricing strategy and profitability. Fluctuations in the costs of raw materials, production, and transportation, as well as changes in trade policies or tariffs between Mexico and China, may disturb import costs. Exchange rate fluctuations between the Mexican peso and the Chinese yuan, or the US dollar if transactions are designated in dollars, can influence project expenses.

If the Chinese yuan strengthens against the Mexican peso or against the US dollar, the importation project may become more expensive. Hence, the Mexican consumer spending patterns can influence the demand for blue light blocking products, since this is not an essential product. Consumer spending patterns, labor costs in China, and demand-supply dynamics in Mexico also play vital roles. If the labor costs for Chinese manufacturers and factories increase, it would directly impact the cost of importing the products to México. The level of demand for the blue light screen protectors and blue light glasses in México can impact the price of these, now that if the demand is high and supply is low, the prices may increase. Contrarywise, if the demand is low and the supply is high, the prices may decrease. Finally, the transportation costs of importing these products may influence the project, since the products are planned to be imported from China to México and factors such as shipping fees, fuel prices, and import taxes may all increase the total transportation costs.

Social

Increasing awareness of the health risks related with prolonged blue light exposure has stimulated demand for blue light products. Consumer awareness levels directly influence product demand, with more awareness potentially driving sales. Shift in consumer preferences, attitudes and patterns towards

technology, eye health and/or other megatrends, and demographic factors such as age and income levels can further shape the market demand.

Technological

Global advancements in technology continually shape the development of blue light blocking products. Manufacturing and distribution technologies impact production processes and disposal approaches. The availability of substitutes or alternative methods to block blue light, such as night mode features in devices or blue light blocking applications, influence product demand and sales. Replacements or substitute methods to block blue light can cause a mayor effect in the demand and sales. The night mode or blue light filter feature, which may be a substitute, is included in most smartphones, tablets and computers and has a built-in night mode of blue filter feature that reduces the amount of blue light emitted by the screen, however, this alternative consumes a lot of battery quickly from your devices, plus is not considered enough protection for your vision. Adjusting your screen settings on your device, adjusting your own screen distance and angle are other replacements nowadays, as well as blue light blocking applications, blue light therapy devices, among some others.

Environmental

The environmental impact of manufacturing and distribution of blue light blocking products, including material usage and energy consumption, has implications for product popularity and sales.

Legal

Health and safety regulations need to be obeyed in the production and marketing of blue light blocking products as well as the intellectual property laws and regulations that may impact the development and distribution of the products. Also, the labelling and the advertising laws and regulations must be respected to appropriately represent the benefits and features of blue light blocking products.

5.2 Porter's five forces

- Threat of new entrants: **Moderate**

The blue light industry demands specialized knowledge and high-skilled equipment, representing the development and manufacturing of quality products costly. Established companies benefit from solid supplier and distributor relationships, creating barriers and a challenging environment for new entrants to compete on price or access to distribution. However, the growing demand for blue light screen protectors and glasses gives opportunities for new players. While brand loyalty to the already established competitors and switching costs moderate the threat, high capital requirements and customer loyalty contribute to the moderate threat of new entrants.

- Threat of substitutes: **Low**

While substitute strategies exist to alleviate blue light exposure, such as reducing screen time, using night shift, or using software applications, their effectiveness and convenience are lower to blue light blocking products. These alternatives often compromise battery consumption and lack the efficacy of loyal blue light protection products.

- Power of suppliers: **Moderate**

Suppliers' bargaining power varies based on the exclusivity of their products and the demand for materials like lens material and frames. While some suppliers hold leverage due to limited supply chains or high demand for certain materials, others have less bargaining power if their products are available for multiple sources of distribution, facing competition from various sources. Overall, the industry features moderate supplier power due to a competitive market with few barriers to entry for new suppliers.

- Power of buyers: **Moderate**

Buyers handle moderate bargaining power, able to shop across various platforms (online or instore) and compare prices and features. However, the high cost of developing quality products limits the number of competitors, granting sellers some negotiating leverage.

- Rivalry among existing competitors: **High**

The Mexican market possesses well-known brands with robust brand recognition and loyal customer bases, creating not only strong competition, but advantage compared to newer or smaller competitors. As awareness of blue light's negative effects develops, demand for related products increases, intensifying rivalry. International competitors entering the market may further intensify competition and leverage their brand recognition.

The Mexican market for blue light products is characterized by a mix of local and international brands, including online retailers and technology stores. Among the most recognized brands are Ben Franklin, Blue Shield, Alibaba, Amazon, and Best Buy. While Alibaba and Amazon offer convenience, other like Ben Franklin and Blue Shield specialize in specific products or services, like glasses or insurance-linked blue light protection. Best Buy offers a wide selection in-store although at somewhat higher prices compared to online alternatives. In terms of quality, in-store sales allow for in-person testing, whereas online purchases rely more on reviews.

Comparison among top brands in Mexico

Figure 8 provides a comparison of leading brands based on focus, price, accessibility, variety, and quality. These retail giants serve as leading competitors for introducing blue light products in optical stores, leveraging their brand recognition and market influence. The manufacturing companies of the blue light products would be a more focused and specialized approach and these companies will lack of brand recognition, pricing benefits and marketing influence that the big retail companies like the listed ones in figure 8 own. Prices may vary depending on factors like brand, quantity, shipping costs and taxes.

Competitor	Focus	Price	Accessibility	Variety	Quality
Mercado Libre	Online marketplace	Wide range with competitive options. Average price Glasses: \$45 Screen protectors: \$20	Multiple sellers, broadly reachable.	Local and international brands.	May vary, customer reviews may help.
Opticas Lux	Eyewear	Higher prices due to premium eyewear. Average price: \$120	Physical stores and online shopping alternative.	Glasses only.	High quality, includes prescription options.
Ocushield	Blue light accessories	Mid-range pricing. Average price Glasses: \$80 Screen protectors: \$50	Online store and selected retailers.	Protection products for devices and eyewear.	High quality, strong focus on reducing blue light exposure.
Ben Franklin	Blue light screen protectors and glasses from various brands.	Affordable to mid-range. Average price Glasses: \$35 Screen protectors: \$20	Physical stores and in online platforms from major retailers (Walmart.)	Glasses only. Good variety but depends on retailer/store location.	Varies by brand, but normally reliable.
Amazon	Online marketplace	Wide range with competitive options. Average price Glasses: \$50 Screen protectors: \$25	Multiple sellers, broadly reachable.	Local and international brands.	May vary, customer reviews may help.
*Prices shown in USD.					

Table 2: Competitors table. Source: Own elaboration.

Suppliers on online platforms such as Amazon and Mercado Libre, may impose a minimum order quantity (MOQ) that can influence purchasing decisions but offer broad variety and competitive pricing. Opticas Luz concentrates in high-quality blue light glasses with qualified services but offers less variety in screen protectors. Ben Franklin offers affordable alternatives with somewhat variety, varying in quality, and, finally, Ocushield would focus on high quality blue light protection products and eyewear accessible mostly online. The advantage of optical stores is mainly in the ability to assess blue light effectiveness through spectrophotometry, ensuring accurate filtering levels.

For implementing blue light products in optical stores, a five forces analysis reveals moderate supplier bargaining power, along with a moderate to low threats of new entrants and substitutes. Buyer bargaining power is moderate, while competition in Mexico is high. The uniqueness of the business idea lies in the knowledge in eye health care and the professionalism offered by optical stores, where qualified professionals can provide tailored recommendations and personalized services, involving customization adjustments and face-to-face evaluations.

Overall, while competitors may offer convenience and broader prices ranges, importing from Alibaba and implementing products in optical stores delivers a more personalized and expert-driven experience, enhancing customer satisfaction and trust in eye care services.

5.3 SWOT

Strengths

- Medically certified solution to alleviate digital eye strain, validated by optical stores.
- Business focus on eye health care.
- Offering both prescription and non-prescription options for glasses.
- Easy installation kit for screen protectors, designed to perfectly fit smartphones.
- Wide variety of glasses styles and colors available.
- Compatibility with various screen types, including iPhone, iPad, and laptops.
- Use of environmentally friendly materials in packaging and production.
- Cost-effective sourcing over importing from Alibaba in China.

Weaknesses

- Quality control challenges may arise during the overseas importing process.
- Initial market size may not be sufficient to sustain profitability during the pilot test phase.
- Skepticism and lack of awareness among the population may affect demand.
- Shipping costs from Alibaba may influence overall product costs.
- Limited brand recognition in the market.
- Low penetration into optical stores in Nuevo León.
- High product costs may dissuade potential customers.

Opportunities

- Offer complementary products to customers undergoing regular eye health checkups.
- Search product diversification opportunities.
- Expand nationally to optical stores across Mexico.
- Leverage digital platforms for online optical store growth.
- Seek international partnerships and collaborations.
- Capitalize on increasing awareness of the unsafe effects of blue light from electronic devices.
- Target the student segment in Nuevo León, given its attractiveness as an educational destination.
- Access to the growing demand for digital devices and consumption.
- Exploit the large number of optical stores and eye care clinics in Nuevo Leon.
- Target the emergent middle class, capable of affording premium products.

Threats

- Competition from established players entering the eye health care industry.
- Competitive setting in the online marketplace.
- Economic downturns leading to reduced consumer spending on non-essential items.
- Customer preference for technological advancements or existing substitute solutions.
- Prescript reading glasses that also incorporate blue light filter
- Shift in social trends impacting consumer preferences.
- Potential regulatory restrictions on the importation or sale of the products from China to Mexico.

Key success factors (KSF) identified:

- 1. Awareness and education:** Updating consumers about the possible risks of blue light exposure and the benefits of preventive measures.
- 2. Product quality:** Guaranteeing scientifically validated products through reliable manufacturers and rough testing processes.
- 3. Professional recommendation:** Including ophthalmologists and eye care professionals to recommend blue light screen protectors and glasses, building trust, and boosting sales.

In summary, Blue Effect's sustainable competitive advantage lies in its high-quality products, effective distribution network, and commitment to innovation. Dr. Guillermo Chapa highlights the importance of awareness, product quality, and professional recommendation as critical success factors in implementing blue light screen protectors and glasses in Mexican optical stores.

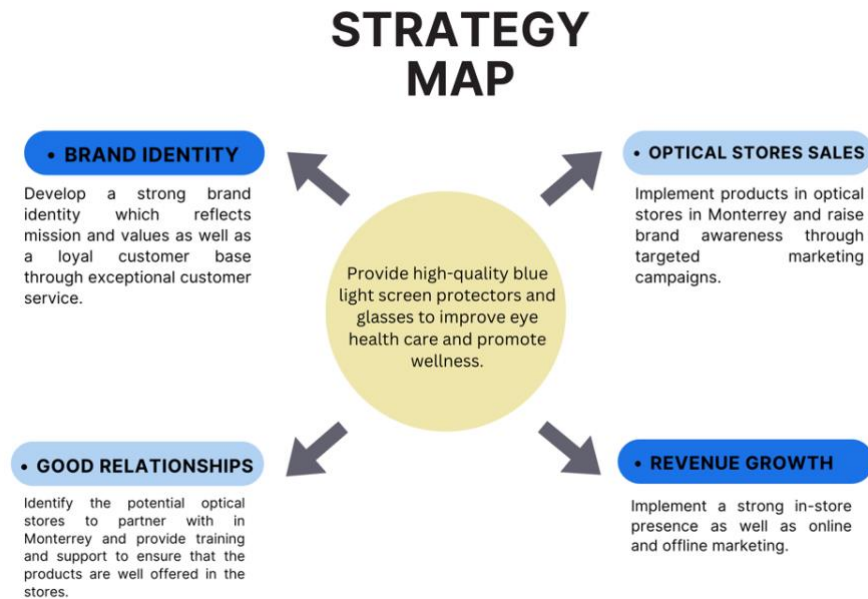


Figure 8: Strategy map. Source: Own elaboration.

6. Target market

Following the conducted survey, the primary target identified covers individuals aged 22-28 who have completed either a bachelor's or master's degree and typically work in office setting or are students.

Additionally, a GE matrix was employed to further analyze market segmentation, considering two key axes: market attractiveness and business strengths. This analysis identified several main segments:

- **Digital professionals:** This segment includes individuals who spend a significant amount of time using digital devices such as computers or laptops, often in professional capacities as office workers or remote employees.
- **General online content consumers:** This segment incorporates individuals who frequently engage with online content, such as watching or creating videos and interacting with social media. While not necessarily focused on professional tasks, they are heavy users of digital devices for entertainment and leisure purposes.
- **Student and parents:** This varied segment comprise individuals of all ages, from primary school students to university attendees, as well as their parents. Students rely heavily on digital devices for educational purposes, including online learning and research. Parents, on the other hand, are progressively disturbed about their children's screen time and pursue solutions to mitigate the potential effects of blue light exposure.
- **Gamers:** This segment specifically targets individuals passionate about gaming, who spend extensive periods in front of screens. Blue light screen protectors and glasses offer potential benefits in reducing eye strain and enhancing visual comfort during gaming sessions.

By recognizing and understanding these key market segments, personalized strategies can be developed to effectively target and address the specific needs and preferences of each group.

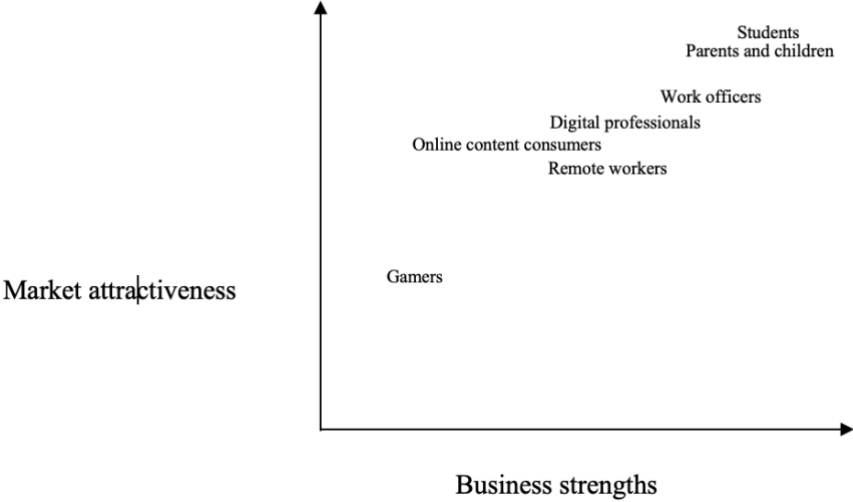


Figure 9: GE Matrix market segmentation. Source: Own elaboration.

Considering the prevalent nature of digital device usage in the Mexican market, as reported by the Mexican Internet Association (AMIPCI) in 2020, market attractiveness is underscored by the fact that 91% of internet users access the internet through their smartphones, underlining extensive use of mobile electronic devices.

The target market involves individuals who use electronic devices frequently, such as iPhones, iPads, and laptops, and spend substantial time in front of screens, thereby expressing concern about the potentially damaging effects of blue light on their eyes. According to Statista, data on the distribution of Apple OS smartphone traffic in Mexico in February 2023, revealed that smartphones running on iOS 16.2 accounted for 26% of all web traffic generated by iOS smartphones in Mexico. Despite this moderately low percentage, the implementation of blue light screen protectors holds promise for success due to some factors, including the growing iPhone user base. The increasing popularity of iPhones in Mexico can be accredited to user’s preference for the Apple experience, which is often related with trust and security, as highlighted in the market industry analysis.

In terms of geographic variables, this study focuses on the Nuevo Leon state, and thus, it is essential to consider individuals who reside or work in areas characterized by high levels of digital screen usage. According to data from the Instituto Nacional de Estadística y Geografía (INEGI) in Mexico, out of a total Mexican population of 126.7 million, 88.2 million individuals are cell phones users, and 44.4 million are computer users, among those aged six and over. The INEGI also conveyed that in 2020,

91.8% of cell phone users owned a smartphone, with smartphones being the top internet access channel at 96.0%, followed by computers at 33.7%, and the rest using televisions with internet access. (INEGI, 2020) These statistics highlight the predominant nature of digital screen time in Mexico. Considering the high rates of smartphone and computer usage, the implementation of blue light screen protectors for electronic devices and blue light glasses presents an opportunity to address a common need and positively influence the eye health and well-being of a significant portion of the population.

Regarding psychographic variables, it is crucial to target health-conscious, tech-savvy individuals who prioritize self-care and wellness, as they are most likely to be interested in purchasing blue light screen protectors and blue light glasses. In terms of behavioral variables, individuals who habitually use electronic devices for entertainment, personal, or work-related purposes are more likely to express interest in these products. Additionally, people who are aware of the symptoms of digital eye strain and prioritize their wellness are also likely to be receptive to these offerings.

6.1 Target audience

The Vision Council's report, titled "Eyes Overexposed: The Digital Device Dilemma," emphasizes different digital device usage patterns and habits across different age groups. Millennials in their 20s exhibit an affinity for seamlessly transitioning between diverse technologies, from streaming TV series to working or studying on laptops and engaging with social media networks. A 73% of individuals in this age group describe experiencing symptoms of digital strain, with approximately 90% habitually using their devices within an hour before bedtime, as part of their routine.

Moving to adults in their 30s, this demographic commonly utilizes laptops and computers for professional tasks, with 68% relying on smartphones for navigation and nearly 18.1% turning to tablets for culinary inspiration. Furthermore, 34% occupy in gaming on smartphones, while one in ten use tablets for online shopping.

As individuals enter their 40s, they face challenges related to aging vision, frequently struggling to maintain focus at changing distances. Therefore, 66% of this group experience symptoms of digital eye strain. Despite these challenges, 59% use laptops for online shopping, and 21.5% use computers to track their fitness habits. Likewise, an important portion – 65% – spends over five hours per day on digital devices.

Adults in their 50s primarily rely on laptops and computers, with 55% spending more than five hours a day on digital devices. In this group, 63.9% report experiencing symptoms of digital eye strain. Meanwhile, individuals around the age of 60 are progressively incorporating technology, with 37% dedicating five or more hours daily to digital devices. Markedly, 53.4% of this demographic experience symptoms of digital eye strain, underlining the importance of attending this issue across age groups.

Adults in their 50s rely on laptops and computers as their base devices, 55% spend more than five hours on digital devices each day and from this segment, 63.9% report digital eye strain symptoms. Adults around the age of 60 exemplify the rapidly growing demographic on Facebook and some of them have seen in the desire of adopting technology in their living standards. 37% spend five or more hours on their digital device daily and 53.4% of them experience digital eye strain symptoms. These older segments tend to use their laptops for activities such as finding a recipe (61%), performing research (84%), checking out their social media networks (59%), playing games (21%) and getting directions (55%).

To complement these findings, a quantitative survey including close ended questions was conducted in Nuevo Leon, involving 30 respondents of both genders: 73.3% being female and 26.7% male. Such survey was shared digitally and performed randomly and in a convenient way. Most respondents fell within the 22-28 age range (53.3%) and held a master’s degree (63.3%). Primarily office workers or students, 21 out of 20 respondents using electronic devices for over six hours daily. Notably, Figure 9 illustrates that 26 out of 30 respondents use electronic devices more frequently than iPads and laptops.

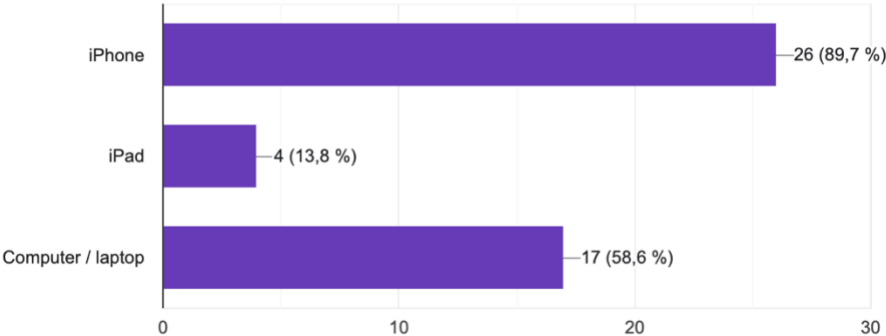


Figure 10: Electronic devices frequency - Own performed survey data. Source: Own elaboration.

Have you ever used a blue light glasses or blue light screen protector for your electronic devices?
33 respuestas

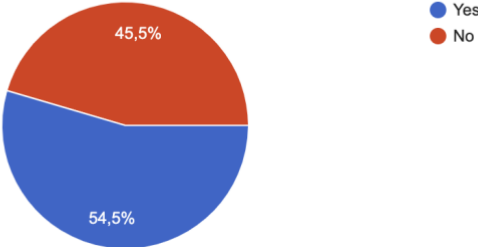


Figure 11: Blue light accessories' usage. - Own performed survey data. Source: Own elaboration.

Given the elevated level of technology access and education in urban areas like Nuevo Leon, it's wise to assume that individuals aged 20-35 are conscious of the symptoms associated with digital eye strain resultant from prolonged exposure to blue light. Survey respondents have reported experiencing such symptoms and demonstrate an understanding of the responsibility of blue light in causing digital eye strain. This serves as a valuable market insight, indicating that the implementation of blue light screen protectors and glasses in optical stores throughout Nuevo Leon holds promise as a viable business opportunity to address the predominant issue of the digital eye strain among Mexicans. For a detailed analysis of the survey findings, please refer to the appendix section.

7. Marketing strategies

7.1 Positioning

The positioning strategy for blue light screen protectors and blue light glasses revolves around health and wellness, suggesting solutions to mitigate the negative effects of blue light exposure on eye health. These products are situated as essential for individuals who spend prolonged periods in front of screens, emphasizing the importance of protective procedures to support a digital lifestyle. Likewise, the positioning strategy features the premium quality and advanced technology inserted in these eye healthcare sector products, underlining their convenience and stylish design. Blue Effect aims to launch itself as a reliable and trusted brand, offering medically qualified products renowned for their quality and innovation. Through strategic partnerships with optical stores, customers will come to distinguish Blue Effect as a brand they can trust.

7.2 Distribution channels

Possible channels

<i>Key factors</i>	Weighting	Optical Stores		Amazon		Best Buy	
		Value	Weight	Value	Weight	Value	Weight
<i>Investment needed</i>	15%	5	0.75	6	0.9	4	0.6
<i>Product quality</i>	35%	9	3.15	7	2.45	8	2.8
<i>Mkt and promotion</i>	35%	8	2.8	6	2.1	5	1.75
<i>Reach</i>	15%	8	1.2	7	1.05	7	1.05
TOTAL	100%		7.9		6.5		6.2

Table 3: Distribution channels. Source: Own elaboration.

The distribution channel analysis outlined above draws from insights presented in “Creating Effective Distribution Systems”, authored by William C. Moncrief and Robert J. Cravens. This framework retains a decision chart methodology to assess potential distribution channels, considering key factors like

required investment, product quality, marketing and promotional capabilities, and market reach. Each factor is given a weight, which is then used to calculate a total score for each distribution channel option.

Upon thorough analysis, it is determined that the optimal strategy includes distributing the blue light screen protectors and blue light glasses through optical stores via direct in-store sales. This approach implies offering medically tested products endorsed by ophthalmologists, coupled with comprehensive information about their benefits to customers.

7.3 Product and price policy

Figure 15 provides an outline of the featured products and their respective characteristics. All products listed maintain the same recommended selling price of \$35 USD (inclusive of VAT) across optical stores. This pricing strategy is tactically chosen to be competitive yet realistic compared to higher-priced choices in the market, striking a balance among quality and affordability. Offering a 15% margin to optical stores serves as an incentive for them to actively promote and sell the products, promoting mutually valuable collaborations. To solidify relationships with optical stores, samples will be distributed during the business launch, proving a promise to partnerships. Pricing strategies are intricately tied to the positioning strategy, guaranteeing competitiveness while conserving an average price point in relation to competitors.

Each product package includes essential accessories such as antibacterial wipe, a microfiber towel, stickers for screen debris removal, a tempered glass screen guard against blue light, and a bubble removal accessory. For iPhone users, the package includes a special adapter facilitating easy screen protector application, boosting customer convenience and satisfaction. This innovative design, as shown in Figure 18, ensures stress-free and bubble-free fitting of the screen protector. Also, eyewear packages include a committed case and offer a variety of styles to choose from. Custom prescription alternatives are offered, supplying to individual preferences. To improve visibility within optical stores, investment in a rotating triangular display for glasses is proposed, priced at nearly 48€, based on Shunfa decoration.

Laptop	iPad
MacBook 12"	Mini 4, 5, 6
MacBook 13"	Air / Air 2
MacBook Air 13"	Pro 9.7
MacBook 15"	iPad 10.2"
Universal laptop 14	iPad 10.9"
Chromebook 11.6"	iPad Pro 12.9"
iPhone	Glasses
iPhone SE (2022)	Style 1 – crystal
iPhone XR/11	Style 1 – black
iPhone 12	Style 2 – caramel tortoise
iPhone 13/ 13 pro max	Style 2 – mustard
iPhone 14	Style 3 – steel grey
iPhone 14 plus	Style 3 – bright gold

Table 4: Pricing shown in USD. Source: Own elaboration.



Figure 12: iPhone package prototype. Source: Own elaboration.



Figure 13: Auto align special adapter kit. Source: Shenzhen Lifengda Technology Co., Ltd.

Figure 15 illustrates the designed addition of a user-friendly manual on the back of the package guiding customers through the application process of the screen protector using the special adapter kit.

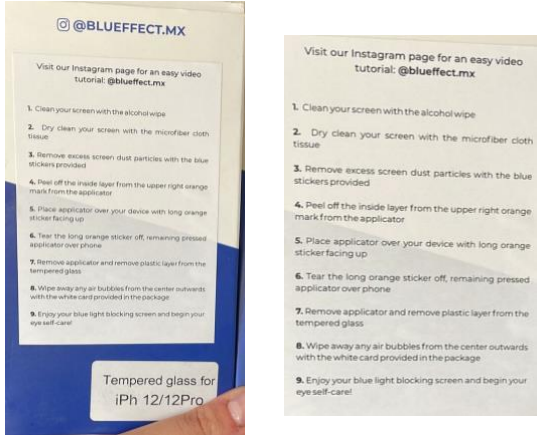


Figure 14: iPhone application instructions tutorial. Source: Own elaboration.



Figure 15: Packages sample. Source: Own elaboration.



Figure 16: Rotating triangular display for glasses. Source: Shunfa decoración.

7.4 Promotion strategy

As part of the communication and promotions strategy, a comprehensive consumer journey map is essential to optimize customer engagement at every phase. Our target audience, including work officers, remote workers, digital professionals, students, parents and children, gamers, and online content creators, are heavily dependent on digital screens, making them vulnerable to digital eye strain. Awareness of blue light issues is distributed through online channels such as websites, blogs, and social media, accompanied by offline sources like word-of-mouth referrals, marketing initiatives, and educational materials in optical stores.

During the consideration state, potential customers embark on product research, looking for solutions to improve digital eye strain. They explore several alternatives, involving visiting optical stores, browsing online marketplaces like Amazon, and seeking recommendations from ophthalmologists, family, and friends. Emotionally, they aspire to find an effective blue light protection method that meets their needs, comfort requirements, and brand reliability standards.

The purchase stage marks the final decision-making phase, whether at physical optical stores or e-commerce platforms. Customers get involved in price comparisons, product selection, and transaction completion. Upon purchase, they experience relief and satisfaction, having found an efficient resolution to uphold their eyes from blue light exposure.

Post purchase, our commitment to exceptional customer service extends through post-purchase emails and loyalty programs tailored to blue light products. Satisfied customers may show loyalty by leaving positive reviews, engaging on social media platforms, and recommending our products, thereby solidifying their trust in our brand, and confirming their aware decision to prioritize blue light protection.



Figure 17: Customer journey map. Source: Own elaboration.

The communication and media plan for Blue Effect will comprise Instagram, Facebook, and our official website. Leveraging influencer marketing and social media advertising will be our primary approaches to efficiently engage with our target audience.

Primarily, we will cooperate with micro-influencers based in Nuevo Leon, who typically have between 10,000 to 50,000 followers and offer more cost-effective partnerships. On average, these collaborations may range from \$100 to \$500 per post, warranting proficient allocation of resources. In terms of social media advertising, we will consider the cost-effectiveness of each platform. For Instagram ads, the average CPC (cost per click) fluctuates between \$0.20 to \$2.00, with a CPM (cost per thousand impressions) of nearly \$6.70. Correspondingly, Facebook ads may range from \$0.50 to \$2.00 per click, differing on the targeting criteria and ad placement.

By usefully applying these channels and enhancing our advertising spend, we aspire to increase our reach and engagement with our target audience, driving awareness and consideration for Blue Effect’s products.

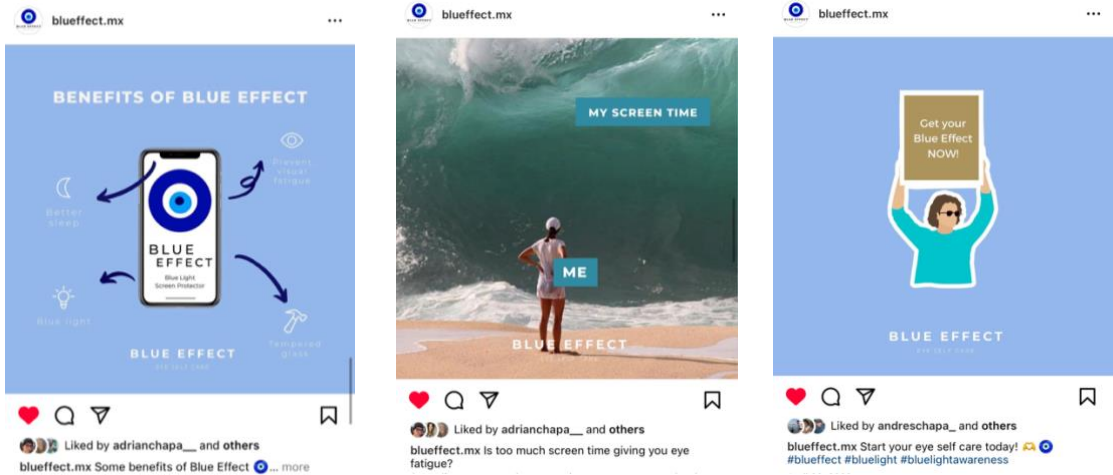


Figure 18: Potential Instagram posts examples. Source: Own elaboration.

The distribution strategy for Blue Effect will adopt a hybrid approach, combining both traditional retail channels by selective distribution in optical stores in Nuevo Leon as well as online distribution to maximize reach and accessibility. By selectively partnering with optical stores in Nuevo Leon and conserving an online presence, we aim to serve to a diverse customer base (omnichannel approach) and deliver a seamless shopping experience.

To improve customer engagement and incentivize product trials, promotional offers and discounts will be led, especially for first-time buyers or through buy-one-get-one-free deals on our website. Besides leveraging partnerships, we plan to join in relevant events concentrated on eye health and blue light

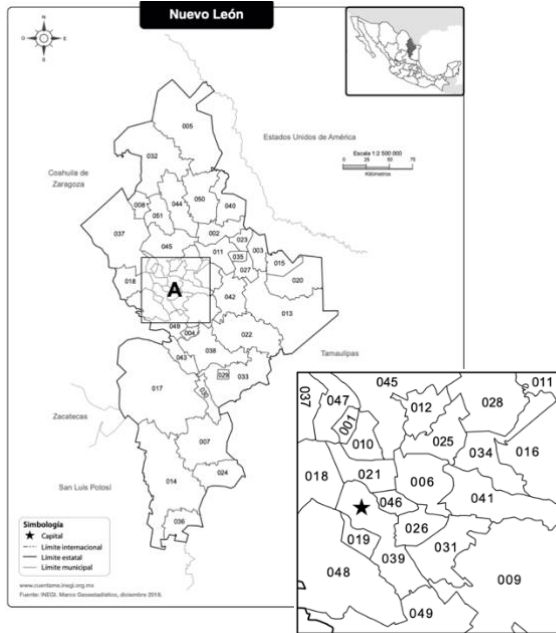
technology to showcase our products and network with potential customers and suppliers.

For the pilot test phase, adhering to SMART (Specific, Measurable, Achievable, Relevant, Timebound) goals methodology, our primary objective will be to import a total of 120 units from Alibaba and distribute them across three optical stores in Nuevo Leon over a three-month period. These stores will be strategically located in San Pedro Garza Garcia, Santa Catarina, and Monterrey, three affluent municipalities known for their economic activity and consumer base. This way, 40 of the items will be distributed equally in each optical store, each one having 40 units. San Pedro Garza Garcia, with its affluent residents and commercial establishments, is home to shopping centers, trendy boutiques, schools and educational centers, work offices and big corporations and hospitals including optical stores, presenting an ideal market for our products. Santa Catarina, a rapidly growing area, offers opportunities among families and commercial centers. Monterrey, being the industrial and business hub, provides access to a diverse demographic, including students, professionals, and cultural enthusiasts.

The success of the pilot test will be evaluated based on sales performance during the three-month period, profitability, and customer feedback. We aim for a minimum sales target of 10% of the units implemented to consider the test successful. This phase will not only assess market demand but also gather insights into customer satisfaction and preferences, advising future expansion plans.

Following the pilot test, expansion through additional optical stores will be explored, considering Nuevo Leon's extensive network of nearly 800 optical stores. Key performance indicators for the expansion phase will include market penetration, customer satisfaction, sales revenue, and brand awareness, guiding our decision-making process and ensuring sustainable growth.

After the pilot test, it will then be assessed the alternative of expansion through more optical stores in the state, considering there are approximately 800 optical stores in the city and partnerships will be done. Besides the strategic goals previously mentioned, more key performance indicators for the expansion phase will be market penetration, customer satisfaction, sales revenue, and brand awareness to serve as a guide for assessing the project in terms of valuable insights and the future decision-making process.



019: San Pedro Garza Garcia
 048: Santa Catarina
 039: Monterrey (capital)

Figure 19: INEGI Nuevo León map and municipal division. Source: INEGI, 2023.

8. Brand identity

The logo, created by the founder, represents Blue Effect's essence with a symbolic eye element, aligning with our core value of protecting vision from blue light emitted by electronic screen. The choice of blue color shades was considered, symbolizing trust, confidence, and intelligence, traits we aim to inculcate in our customers. Our slogan, "Protect your vision, elevate your life", emphasizes the significance of prioritizing eye health and investing in self-care for a healthful lifestyle.



Figure 20: Blue Effect's logo. Source: Own elaboration.

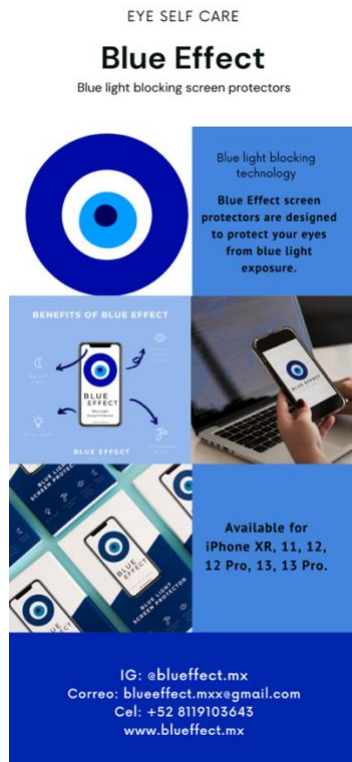


Figure 21: Blue Effect advertising flyer. Source: Own elaboration.

9. Sales revenue projections

For the pilot test, we plan to order 120 units from Alibaba, including 18 screen protectors' models for several electronic devices (iPad, iPhone, and laptops) and 6 different styles of glasses. The estimated initial investment is approximately \$385, covering procurement at \$1.5 per unit, shipping (\$35), handling (\$10), and marketing (\$150). It is crucial to acknowledge that these costs may fluctuate depending on factors such as the quantity of items purchased, the chosen parcel delivery service, customization requirements, and package size and weight, as well as possible inflationary impacts. With a recommended market price of \$35 per unit, the contribution margin per unit is of \$33.5, although the real margin is affected by importation costs. To break even, 11 units need to be sold. Assuming the success of the pilot test, the numerical distribution is estimated to be 15%.

For the expansion phase, bearing in mind Nuevo Leon's market of nearly 800 optical stores, we estimate a 15% market penetration, capturing 120 customers annually. If 25% of these stores agree to partner with us, selling an average of 30 units per year, and accounting for an annual churn rate of 33%, we project losing about 37 clients per year.

Given the project's inherent uncertainty of the project, three scenarios are evaluated to provide guidance, acknowledging potential price fluctuations and varying unit sales.

In the optimistic scenario, the projection is to sell 2,000 blue light products through direct selling in optical stores, with 30% of the 800 optical stores agreeing to a partnership (240 stores), with a total revenue estimated at \$59,500 after a 15% commission fee.

For the expected scenario, the projection is to sell 1,500 blue light products through direct supply in 160 optical stores, with 20% of the 800 optical stores agreeing to a partnership (160 stores), yielding total revenue of \$44,625.

In the pessimistic scenario, the projection is to sell 1,000 blue light products through direct distribution, with a 10% partnership (80 stores), resulting in total revenue of \$29,750.

	FIRST SCENARIO OPTIMISTIC	SECOND SCENARIO EXPECTED	THIRD SCENARIO PESSIMISTIC
Sales (units)	2000	1500	1000
Revenue before commission	\$ 70,000.00	\$ 52,500.00	\$ 35,000.00
Commission Optical Stores	\$ 10,500.00	\$ 7,875.00	\$ 5,250.00
Partnerships	30%	20%	10%
TOTAL REVENUE	\$ 59,500.00	\$ 44,625.00	\$ 29,750.00

Figure 22: Sales plan. Source: Own elaboration.

10. Investment plan

To initiate entry into the optician’s industry in Nuevo Leon, the distribution strategy means conducting a pilot test by introducing 120 units into three selected optical stores. The expenses associated with this phase include the service fee from Alibaba, cost of goods sold (COGS), marketing and advertising, and the shipping fee from DHL.

Product type	Number of models	Quantity (units)	Total
iPhone screen protector	6	5	30
iPad screen protector	6	5	30
Laptop screen protector	6	5	30
Glasses	6	5	30
Total	24		120

Table 5: Investment plan pilot test. Source: Own elaboration.

For the expansion phase, the investment requirements are summarized as follows:

Item	Cost (USD)
Building rent	\$10,000/monthly
Furniture	\$400
IT equipment	\$2,500
Wages	\$550 per salesperson/monthly
Marketing & Advertising	\$290/monthly

Table 6: Investment plan. Source: Own elaboration.

The building rent covers the physical space required for operational activities. It’s noteworthy that the rent for the building will start from the year 2026 onwards, as during the pilot test phase, operations will be conducted from the owner’s residence, and it will be there where everything will take place at the beginning. IT equipment involves computers and printers necessary for salespersons and distribution planning. Furniture contains chairs and desks essential for workspace setup in the building warehouse. In this phase it is included bundling the delivery of blue light screen protectors and glasses with a parcel shipment such as Estafeta, DHL or Redpack. Marketing and advertising expenses comprise campaigns and social media initiatives, along with necessary decorations for placement in optical stores. Prices may be influenced by an inflation rate of 8% annually in Mexico.

11. Operational execution

To ensure the delivery of high-quality blue light products, rigorous quality control measures must be upheld throughout the blue light protection process. Selection of suppliers on Alibaba’s platform needs careful consideration of companies having suitable quality certifications, ensuring safe import practices and loyalty to supply chain standards. The procurement plan begins with supplier selection, assessing candidates grounded on certification standards and competitive pricing. Factors such as production capacity, lead time, quality control, and reputation are predominant in this assessment. When the supplier is selected, it is important to verify their quality control processes in the company, to assure that the verification of the products' details and specifications are met.

Negotiations follow, where Blue Effect delineates production timeline expectations, pricing terms, and payment schedules while overseeing adherence to quality standards.

As a business importing blue light screen protectors and glasses from Alibaba, manufacturing responsibilities rest with the supplier. Upon completion, products are shipped directly to Mexico, where Blue Effect manages delivery to optical stores. Direct distribution targets to sell products directly to optical stores, bypassing intermediaries for increased control over sales processes and enhanced partnership relations, having higher margins, besides also guaranteeing customer service experience.

Focus is placed on quality over quantity, with exclusive optical stores in Nuevo Leon chosen to align with customer base and warrant controlled distribution.

Post-successful pilot testing, project expansion implicates increased unit imports and placement in additional optical stores, targeting a 20% growth in optical store placements from 2024 to 2025. Initial distribution in the first year, will require one salesperson for store deliveries, with Alibaba managing logistics until demand demands the engagement of third-party providers. Secure storage for inventory will be conserved in a rented office, with committed teams managing inventory and order fulfillment, including warranty, return policies and product support, including instructions and tutorials of the application of the screens and their benefits inside the packages.

Potential risks involve supply chain disruptions due to shipping limitations, container allocation issues, and slowdowns in container rotations post-COVID-19. Additionally, Chinese New Year shutdowns may impact operations, this being the most celebrated public holiday in the country and usually takes place at the end of January, beginning of February and lasts seven days, with the possibility of lasting longer. Customs and import risks pose tariff, tax, or regulatory challenges as well. Currency exchange fluctuations and payment processing fees in Alibaba’s platform may affect financial stability. As this is a new industry that is still emerging in Nuevo Leon and not so frequently seen in optical stores with a medical approval, it is possible to face competitors with the same business idea. Mitigation strategies include supply base expansion, to reduce the risk of supply chain disruptions. Marketing investments for consumer education and legal partnerships will also be evaluated, to attend changes in consumer behavior and create legal partnerships to minimize legal risks.

As the business expands, collaboration with third-party logistics providers or customs brokers will simplify import processes and mitigate unforeseen delays or costs. A risk matrix, inspired by David R. Hulett’s “Practical Schedule Risk Analysis,” is presented in Figure 20 to help risks management efforts.

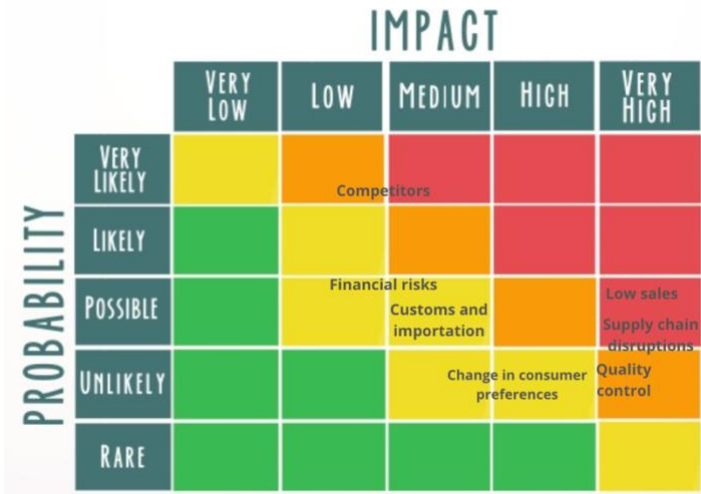


Figure 23: Risks map. Source: Own elaboration.

The alliances policy of Blue Effect includes partnerships with several businesses and crucial organizations for accomplishing its value proposition. These alliances include **supplier partnerships**, which determine strong supplier relationships and ensure the availability of the products. This safeguards a solid supply chain and reduces disruptions in product availability. **Distribution partnerships**, which cooperate with distribution partners that guarantees that Blue Effect products are readily available in optical stores across the target market. The latter helps enlarge the brand's reach and accessibility. Marketing and promotion alliances, which represent strategic partnerships with influencers and relevant business businesses in the eye health care industry, such as insurance companies, which are key for promoting Blue Effect products. Such alliances benefit in increasing brand visibility and market penetration. **Online mobile stores affiliations** exemplify partnering with online mobile stores which enables cross-selling opportunities suggesting complementary items to customers, thereby enriching their overall experience, and increasing sales. **Research and development partnerships** means collaborating with research and development partners which ensures that Blue Effect stays up to date of the latest trends and developments in blue light accessories. This enables the development of advanced strategies and the integration of new technologies into products. Lastly, **social responsibility partnerships**, represent partner with local organizations for charitable initiatives and community events which demonstrates Blue Effect's commitment to social responsibility. These partnerships contribute to the brand's reputation and foster goodwill within the community. By nurturing these strategic alliances, Blue Effect aims to reinforce its position in the market, improve brand reputation and contribute positively to the community's well-being.

12. Human resources management

During the pilot test phase, the team and organizational structure will remain relatively small. This phase serves as an indicator to measure a successful market penetration and customer satisfaction of Blue Light products in the Mexican market, assessing acceptance among the population. The pilot test, which implicates distributing 120 units across 3 optical stores in different areas of Nuevo Leon, will be managed by Susana Chapa and her two brothers, founders of the project. Each member brings exceptional expertise to the table; one founder, proficient in media content and IT, will organize the website creation and social media management. Another founder, with an MBA and commercial mindset, possesses business management knowledge and an innovative attitude towards challenges. The third founder, with a law degree and expertise in communication and negotiation, will handle value proposition development, supplier negotiations, and partnerships with optical stores.

According to Talent.com, the average salary for a salesperson in Mexico is \$66,411 MXN per year, or \$34.06 MXN per hour. An entry level position starts at \$48,217 MXN annually, while experienced professionals can earn up to \$108,000 MXN annually. Initially, Blue Effect will employ one salesperson, with plans to increase to 2,3, and 4 salespersons by years 2,3,4, and 5, respectively. The desired profile

for these roles includes experience in the eye care industry, sales, and administration, with a salary of approximately \$550 USD per year.

As the business expands and generates more revenue, additional managers will be hired at a later stage to contribute expertise in marketing, operations, distribution, and e-commerce.

Employee benefit packages will include a comprehensive training program for onboarding. Additionally, gas vouchers will be provided to cover transportation costs for employees who use their own vehicles to transport products to optical stores.

13. Financial forecast

	Pilot test	2025	2026	2027	2028	2029
# Stores	3	190	228	274	328	394
#Units sold/store	40	11	12	13	14	15
Total Units	120	2090	2736	3557	4596	5910
Recommended Sales Price	35	35	35	35	35	35
Optical stores margin	-5.25	-5.25	-5.25	-5.25	-5.25	-5.25
VAT	-4.83	-4.83	-4.83	-4.83	-4.83	-4.83
Net Price	25	25	25	25	25	25
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Total sales	\$ 2,991	\$ 52,088	\$ 68,188	\$ 88,644	\$ 114,555	\$ 147,285
Service fee Alibaba	\$ 10.00	\$ 35.00	\$ 45.00	\$ 55.00	\$ 65.00	\$ 75.00
COGS	\$ 180.00	\$ 3,135.00	\$ 4,104.00	\$ 5,335.20	\$ 6,894.72	\$ 8,864.64
Gross margin	\$ 2,801	\$ 48,918	\$ 64,039	\$ 83,254	\$ 107,596	\$ 138,346
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Operating expenses						
<i>Wages</i>		\$ 7,128.00	\$ 14,256.00	\$ 21,384.00	\$ 28,512.00	\$ 28,512.00
<i>Employees IMSS 2.7%</i>		\$ 192	\$ 385	\$ 577	\$ 770	\$ 770
<i>Procurement & utilities</i>		\$ 5,184.00	\$ 5,184.00	\$ 5,184.00	\$ 5,184.00	\$ 5,184.00
<i>Building rent</i>		\$ 10,800.00	\$ 10,800.00	\$ 10,800.00	\$ 10,800.00	\$ 10,800.00
<i>Shipping fee DHL</i>	\$ 30.00	\$ 100.00	\$ 150.00	\$ 175.00	\$ 200.00	\$ 250.00
<i>Mkt & advertising</i>	\$ 150	\$ 4,167	\$ 6,819	\$ 8,864	\$ 11,456	\$ 14,729
EBITDA	\$ 2,621	\$ 21,346	\$ 26,445	\$ 36,269	\$ 50,674	\$ 78,101
EBIT	\$ 2,621	\$ 21,346	\$ 26,445	\$ 36,269	\$ 50,674	\$ 78,101
Tax (17.5%)	\$ 459	\$ 3,736	\$ 4,628	\$ 6,347	\$ 8,868	\$ 13,668
Net income	\$ 2,162	\$ 17,611	\$ 21,817	\$ 29,922	\$ 41,806	\$ 64,434
% S/Sales	72	34	32	34	36	44

Table 7: Forecasted P&L. Source: Own elaboration.

The forecasted P&L of the business is calculated taking as reference the following considerations and assumptions:

- The # of units sold/store is assumed to keep growing as the market acceptance is rising.
- The VAT represents a 16% in México.
- Cost of goods sold includes a service fee (handling fee) from Alibaba platform which varies depending on the units purchased but while importing from there, it will always be charged.
- The first year, the wages are calculated to be for one salesperson. The second year for two salespersons and the rest of the years consecutively.

- Overhead costs include wages with the IMSS employee insurance, procurement & utilities, the fixed cost of the renting of the building (office) marketing and advertisement and the shipping fee.
- Marketing and advertisement costs are calculated 5% over the total sales for the pilot test. For the 2025, the 8% over total sales and the 10% on the following years.
- It is considered an 8% of inflation in all the expenses in 2025 and adjusted every year, since this is the latest inflation registered in the Mexican government in 2023. (INEGI, 2022.)

As the forecasted P&L indicates, the company will have a positive net income with the pilot test of \$2,162 and in the expansion phase in 2025 of \$17,611.

Considering the fixed costs for the first year are of \$27,571, the selling price is \$35, and the cost of the supplier is \$1.5, a breakeven analysis is shown and analyzed. Blue Effect would need to sell 69 products monthly to cover all its costs and reach the breakeven point. Once sales exceed this level, the company will start to make profit.

14. Contingency plan

A contingency plan is applied to consider the occurrence of negative events that may disturb the business setup and generate revenue loss. Hence, Blue Effect should design a contingency plan to help minimize the damage and loss in the scenario where any negative event happens. Three potential negative scenarios are described in the following table.

1 st scenario Limited opportunities for partnerships with optical stores in the Mexican market	2 nd scenario Export restrictions due to the pandemic disrupt global supply chains	3 rd scenario Increased competition constraints and shapes market demand
<p>In case there are no partnerships done with optical stores of very few accept to mutually work, the strategy would be</p> <p>do:</p> <ul style="list-style-type: none"> ○ Reduce the target number of optical stores. ○ Increase the optical margin. ○ Consider other municipalities to explore the optical stores range. 	<p>If a global pandemic occurs, risks can include supply chain disruptions, and unforeseen regulatory challenges. In this case, the recommended actions would be to explore local sourcing options, supplier’s diversification in countries less affected and implement an online presence strategy reinforced to reach customers.</p>	<p>Competitors are a potential risk that may limit sales. If this happens, some alternatives can be taken:</p> <ul style="list-style-type: none"> ○ Re-design the brand identity (logo, price, etc.) ○ Evaluate the pricing strategy. ○ Analyze customer feedback for improvement. ○ Conduct a competition analysis to identify opportunities to differentiate existing products.

Table 8: Contingency plan. Source: Own elaboration.

15. Sustainable Development Goals (SDGs)

The present project aims to contribute to social and environmental goals to increase the attractiveness of the focus of the project to socially conscious consumers and in a future, investors. To tackle a meaningful health issue, the United Nations Sustainable Development goals to which said project is aligned will be listed below. **Good health and well-being** (SDG 3); Blue Effect aims to reduce or prevent digital eye strain, which is a rising health concern in our progressively digital world. By lessening the harmful effects of prolonged screen time, Blue Effect promotes better eye health and well-being. **Decent work and economic growth** (SDG 8); offering blue light protection accessories may create job opportunities and incite economic growth. Blue Effect may support the Mexican economy by selling the products internally and support the sourcing of materials and distribution and manufacturing of the importing countries for the project creation.

Partnerships for the goals (SDG 17); by collaborating with the optical stores for the selling of the blue light products, Blue Effect is promoting eye health care, something that also comes with creating awareness about the importance of eye health. **Industry, innovation, and infrastructure** (SDG 9); by including innovative products and being conscious of modern health issues such as digital eye strain, can lead to further innovations in health technology.

Overall, it is understood that by raising awareness about digital eye strain and promoting precautionary methods, may improve quality of life. Educating the audience on the benefits of Blue Effect and in general on the benefits of blue light protection, can lead to healthier screen usage habits.

16. Conclusions and future directions

The implementation of Blue Effect's business aims to offer a solution for filtering blue light emitted by digital devices, providing customers with valuable eye health protection. The core value proposition focusses on reducing digital eye strain, enhancing sleep quality, boosting productivity, and integrating eye health protection into consumers' daily routines through Blue Effect's products.

Through comprehensive market research, including phone interviews and surveys, valuable insights have been collected. Key findings affirm the business plan's objectives, revealing that individuals aged 22-28, identifying as work officers or students, are acutely aware of blue light overexposure and its associated digital eye strain symptoms. Moreover, the majority have not yet studied blue light accessories, underlined the feasibility and viability of the proposed business concept, and identified a significant market opportunity in Nuevo Leon. Despite a competitive landscape, the differentiated sales channel, coupled with professional recommendations, is imposing to drive consumer adoption.

An ordinary investment of \$385 in a pilot test will enable the evaluation of market penetration and acceptance of blue light products in Nuevo Leon, providing valuable feedback. The pilot test acts as a crucial tool for assessing product performance and learning about market dynamics specific to Nuevo Leon. The subsequent expansion phase will require an initial investment of approximately \$29,750 for 2025, covering product costs, wages, procurement, utilities, building rent, marketing, advertising, and shipping fees from DHL. Notably, the strategic partnership with optical stores in the region is primary to the successful implementation.

The project is currently financed through equity, with opportunities for investors to participate in its success and growth, potentially yielding returns of up to 54%.

Also, the incorporation of blue light products into daily life not only promotes eye health but also contributes to sustainability efforts by reducing electricity consumption, given that phone filters consume 20% more battery. The business's sustainable impact extends to supporting a healthy lifestyle for individuals of all ages, aligning with the United Nations' 2030 agenda's objective of Health & Wellness. By promoting these products through optical stores, individuals gain access to valuable information and resources to improve their health and well-being. It is important to raise awareness of the positive advantages of blue light products and educate consumers to make informed decisions concerning their eye health and digital device usage.

To this end, marketing campaigns will be executed to raise awareness of the potential risks of blue light exposure and the benefits of protective measures like blue light screen protectors and glasses. These

campaigns will leverage several channels, including social media, online platforms, and local community events, to extend to a wider audience. Additionally, conducting awareness workshops will provide parents will valuable insights and strategies for managing their children’s screen time effectively.

In conclusion, the Blue Effect project not only addresses an unrelenting market need but also contributes to sustainability goals and public health initiatives. Through strategic partnerships, consumer education, and innovative product offerings, Blue Effect aims to make a meaningful effect on eye health and well-being in Nuevo Leon and beyond.



Illustration 1: Blue Effect

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Appendixes

Appendix 1: Own-elaborated survey “Usage of electronic devices” to people in Nuevo León state.

<https://docs.google.com/forms/d/1cPMeomgnPfQ1adYaLUmlM6mbNGe0Ut7ukRQnXNOSLZo/edit>

Appendix 2: Forecasted P&L.

	Pilot test	2025	2026	2027	2028	2029
# Stores	3	190	228	274	328	394
#Units sold/store	40	11	12	13	14	15
Total Units	120	2090	2736	3557	4596	5910
Recommended Sales Price	35	35	35	35	35	35
Optical stores margin	-5.25	-5.25	-5.25	-5.25	-5.25	-5.25
VAT	-4.83	-4.83	-4.83	-4.83	-4.83	-4.83
Net Price	25	25	25	25	25	25
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Total sales	\$ 2,991	\$ 52,088	\$ 68,188	\$ 88,644	\$ 114,555	\$ 147,285
Service fee Alibaba	\$ 10.00	\$ 35.00	\$ 45.00	\$ 55.00	\$ 65.00	\$ 75.00
COGS	\$ 180.00	\$ 3,135.00	\$ 4,104.00	\$ 5,335.20	\$ 6,894.72	\$ 8,864.64
Gross margin	\$ 2,801	\$ 48,918	\$ 64,039	\$ 83,254	\$ 107,596	\$ 138,346
<hr/>						
Operating expenses						
<i>Wages</i>	\$	7,128.00	\$ 14,256.00	\$ 21,384.00	\$ 28,512.00	\$ 28,512.00
<i>Employees IMSS 2.7%</i>	\$	192	\$ 385	\$ 577	\$ 770	\$ 770
<i>Procurement & utilities</i>	\$	5,184.00	\$ 5,184.00	\$ 5,184.00	\$ 5,184.00	\$ 5,184.00
<i>Building rent</i>	\$	10,800.00	\$ 10,800.00	\$ 10,800.00	\$ 10,800.00	\$ 10,800.00
<i>Shipping fee DHL</i>	\$ 30.00	\$ 100.00	\$ 150.00	\$ 175.00	\$ 200.00	\$ 250.00
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