In-Vehicle Heat Mitigation System

Market Opportunity & 10-Year Global Launch Strategy Case Study

"Stay Cool. Stay Safe. Stay Connected."

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Executive Highlights

• Identified a 100M–150M addressable U.S. consumer base across heat-exposed regions, validating strong commercialization potential.

• Conducted macro-environment (PEST) analysis identifying anti-idling regulations and climate exposure as structural demand drivers.

• Developed focused segmentation strategy targeting safety-conscious, tech-enabled households in high-temperature markets.

• Designed hybrid value-based and cost-plus pricing model projecting $1M gross revenue within 18 months of launch.

• Built 10-year global expansion roadmap targeting 30% integration into new vehicles by 2035.

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Executive Summary

Objective Statement

Parked vehicles can reach dangerously high temperatures within minutes, creating serious risks for drivers, passengers, pets, and the more vulnerable population. The purpose of this marketing plan is to successfully launch the In-Vehicle Heat Mitigation System, providing an innovative, accessible solution that addresses this widespread safety concern and protects people from heat-related harm.

Market Analysis

The In-Vehicle Heat Mitigation System operates within the automotive accessory market where passive sunshades, remote key fobs and solar-powered fans provide inconsistent solutions. External factors, identified through PEST analysis, highlight rising climate temperatures, stricter anti-idling regulations, and growing consumer concern for safety and convenience. Target customers for this solution include anyone who owns a vehicle exposed to high temperatures, including families, pregnant women, babies, those who are chronically ill, pet owners, elderly, commuters, outdoor workers, rideshare drivers, and fleet operators. Key competitors include low-cost solar fans, as well as indirect competitors like remote-start systems.

Marketing Goals

Our long-term marketing goals to be achieved within 10 years include: increasing market penetration and becoming a standard feature in at least 30% of new cars globally by 2035, reducing heat related vehicle incidents by over 70% worldwide by 2035, and expanding our market globally. Our short-term goals to be achieved within 12-18 months are focused on product development and getting the product ready for sale in the United States. These goals align with our mission to provide safety, peace of mind, and energy-efficient comfort for drivers and passengers through innovative technology.

Strategies and Tactics

To achieve these goals, we will market our logo (Figure 3) and slogan “Stay Cool. Stay Safe. Stay Connected.” emphasize the product’s ability to prevent dangerous heat strokes and act as a responsible, app-controlled safety tool. Core marketing tactics include social media campaigns, launching our product on Amazon, working on partnerships with automotive distributors, and getting our product on the shelves at major retail stores. The In-Vehicle Heat Mitigation System’s value proposition drives these strategies by addressing a widespread safety problem with functional, emotional, and life-saving benefits.

Introduction – Situation and Company Analysis

Our In-Vehicle Heat Mitigation System delivers a defensible value proposition with safety, peace of mind, and energy efficient comfort supported by a PEST environment that favors anti-idling, privacy aware, smartphone native solutions; a SWOT profile (Figure 1) that highlights clear strengths and partner-driven opportunities; a pain and remedy fit grounded in proactive monitoring and responsive cooling; a three level product design that translates the core benefit into tangible features and credible services; and near-term and long-term goals with a go-to-market plan that balances price accessibility with trust-building distribution and education.

Internal (SWOT Analysis)

For our SWOT Analysis (strengths, weaknesses, opportunities, and threats) we will evaluate the internal factors that will influence our decisions regarding our product. Refer to our SWOT chart (Figure 1). Starting off with strengths, the In-Vehicle Heat Mitigation System directly tackles real and recurring pain such as unsafe, uncomfortable cabin heat, delivering convenience and control through an app or handheld remote. Straightforward installation and use broaden accessibility, and the product delivers multi-level value: functional, with measurable cabin temperature reduction and time savings; emotional, with peace of mind and stress reduction; and life-protecting benefits for children, pets, and other vulnerable passengers.

For weaknesses, as a new brand, we must overcome low awareness and trust, which can slow early adoption without credible demonstrations, reviews and partnerships. Solar-enabled, connected hardware can drive higher unit costs than basic alternatives, pressuring price strategy and margins. Reliance on mobile connectivity and app features may also discourage less tech-savvy consumers or those with privacy/battery concerns unless the experience is intentionally simple and transparent.

Next with opportunities, public attention to heatstroke risks for kids, pets, and older adults is rising, creating urgency for preventive solutions. Partnerships with auto dealers, insurers, veterinary/pet organizations, shelters, and fleets can extend reach, add credibility, and potentially unlock rebates or accessory financing. There is also an upwards demand for affordable smart devices with customizable features, modes, and cosmetic options, which allows us to tailor the experience for different customers. According to the U.S. Department of Transportation, the United States has over 288 million registered vehicles, which creates a wide foundation for possible buyers.

For threats, the In-Vehicle Heat Mitigation System faces threats from both direct and indirect competitors in the automotive accessory market. Direct competitors include solar-powered and aftermarket ventilation devices, such as Koolatron Auto Kool, IdeaWorks Solar Auto Fan, and Kingfurt Solar-Powered Car Cooling Fans ("Who are 3 competitors for solar powered car cooling fans?") which are inexpensive, easy to install, and widely available through mass retailers. These competitors use tactics like low pricing, heavy retail distribution, and impulse-buy marketing to attract customers. Their strengths lie in affordability, simplicity, and established presence, though their products lack app control, verified temperature performance, and true heat-prevention capabilities. Indirect competitors include reflective sunshades, window tints, portable fans, and OEM-specific cooling modes, which offer partial solutions at lower cost but with limited effectiveness.

Remote-start companies such as Viper, Compustar, and Avital ("Who are 3 three of the main remote-start products on the market?") pose an indirect threat, as they have strong distribution networks and brand recognition. While they currently do not provide non-idling cooling systems, they could potentially integrate similar features if they see market demand. International manufacturers of low-cost solar ventilators also pose a risk by undercutting prices and targeting global markets.

The market remains highly diversified, so while no single competitor dominates, the low barrier to entry for simple cooling devices means fast followers could replicate some features, driving price competition. Customers may be sensitive to cost, installation complexity, or app reliability, and failure to maintain software updates or clear differentiation could erode trust and demand. Although overall interest in automotive cooling solutions is growing due to increased awareness of hot-car risks, these competitive pressures underscore the need for strong branding, verified performance, and ongoing technology innovation to defend market share.

External (PEST Analysis)

Our PEST analysis evaluates the political, economic, social, and technological factors that influence the In-Vehicle Heat Mitigation System and shape both consumer adoption and our long-term strategic decisions. When doing a PEST Analysis (Political, Economic, Social, and Technological), we ask ourselves a variety of questions. Viewing political factors, we need to acknowledge the rules and regulations of the various states as well as the changing government laws having to do with tariffs and more.

For the first point on the political analysis, the In-Vehicle Heat Mitigation System operates with state rules on idling, aftermarket electronics, and consumer safety, so we must design our message to be compliant across jurisdictions. Because the product connects to a mobile app,

we will align with privacy statutes such as the California Consumer Privacy Act (CCPA) through clear consent, data-minimization, and opt-out flows. Import duties and tariffs can affect landed costs, so our supply plan should model multiple sourcing options. Additionally, public agencies and city ordinances continue to promote emissions reduction and anti-idling behavior, so positioning our device as a non-idling cooling alternative keeps us on the right side of policy momentum and vehicle-safety expectations.

Regarding the economic analysis, we focus on safety-conscious families and pet owners with middle-income budgets, so value engineering and tiered bundles help meet price expectations while protecting our margins. Production costs will be managed with tariff-aware sourcing and volume breaks. Framing the device as a "safety necessity" rather than a luxury supports demand resilience during soft economic cycles. Partnerships with auto insurers and automakers are potential levers for rebates or accessory financing, which can lower out-of-pocket cost and accelerate adoption, especially for rideshare and small-fleet buyers who evaluate purchases on total cost of ownership.

For our social analysis, heightened awareness of hot-car injuries and risks makes cabin temperature an emotionally charged issue for parents and pet guardians. Daily life is increasingly organized around smartphones and convenience, so app-based remote controls, alerts, and simple routines can match current habits. Ethically positioning the product as a preventive, life-protecting accessory while reinforcing that it is not a license to leave dependents unattended helps us communicate responsibility and align with community expectations.

Finally, for our technological analysis, rapid advances in vehicle electronics and batteries create both competition and opportunity. Potential solar-assist modules increase usefulness without requiring engine idling. The solar-powered car-vent fan market is growing globally, particularly in Asia-Pacific markets. Direct competitors include solar-powered devices, such as Koolatron Auto Kool, IdeaWorks Solar Auto Fan, and Kingfurt Solar-Powered Car Cooling Fans ("Who are 3 competitors for solar powered car cooling fans?") which are inexpensive and can be bought on average for $20. These competitors use tactics like low pricing, heavy retail distribution, and impulse-buy marketing to attract customers. Remote-start companies such as Viper, Compustar, and Avital ("Who are 3 three of the main remote-start products on the market?") pose an indirect threat, as they have strong distribution networks and integrate mobile app technology. As competitors evolve, our roadmap focuses on reliability, energy efficiency, and seamless integration with common vehicle platforms and accessories.

Value Proposition

The In-Vehicle Heat Mitigation System solves the critical problem of extreme heat buildup inside parked vehicles, where temperatures can exceed 120°F within minutes and create serious risks for children, pets and elderly passengers who either are left in a hot car or enter a hot car. Our PEST analysis shows that this pain is intensified by stricter anti-idling regulations, rising climate temperatures, growing social pressure to prevent hot-car incidents, consumer demand for affordable safety solutions, and the fact that most vehicles still lack built-in cooling technology. Together, these factors reveal that consumers face daily danger, anxiety, and inconvenience without an accessible non-idling solution.

Our SWOT analysis identifies the remedy we can realistically provide: a smart, non-idling, cross-vehicle cooling and ventilation system that can be activated through an app or key fob. The system prevents dangerous temperature spikes, offers immediate cooling before re-entry, operates safely with the vehicle's battery, and can include optional solar assistance. Beyond its functional benefits, it provides emotional reassurance by reducing fear, stress, and guilt associated with hot-car incidents, while helping prevent medical emergencies and legal consequences.

The total market for this solution includes anyone who owns a vehicle exposed to high temperatures, including families, pet owners, elderly, commuters, outdoor workers, rideshare drivers, and fleet operators. According to the Department of Transportation, there are over 288 million registered vehicles in the United States and majority of the country experience high temperatures in the summer making the potential market is substantial. The automotive accessory industry remains large, growing, and highly diversified, with few direct competitors offering non-idling remote cooling systems. This marketing plan focuses specifically on families and pet owners in high-temperature regions because they experience the highest safety stakes, are highly motivated to adopt preventative technology, and represent the strongest opportunity for long-term growth and profitability.

Competing products include solar powered car cooling devices on the market. International competition also poses a real threat. A key strength of these competitors is their cost. Because they are simple, solar-powered ventilators that don't require complex integration or app-based control, they can be sold at very low prices. Their installation is often as simple as mounting it to your window, making it accessible to a broad market. Even when considering remote starter companies, the market remains very diversified, as dozens of brands compete in the aftermarket space and none dominate the majority of sales; moreover, remote starters do not directly compete with a non-idling cooling system, making the competitive landscape for our product largely open. Overall, the In-Vehicle Heat Mitigation System delivers a practical, technologically feasible remedy to a widespread and high-stakes problem. It offers safety, convenience, and peace of mind, forming a strong value proposition aligned with both external market conditions and our internal capabilities.

Value Proposition Statement

The In-Vehicle Heat Mitigation System delivers a safe, reliable, and non-idling solution that prevents dangerously high vehicle temperatures. By combining smart technology with proactive temperature control, it provides comfort, peace of mind, and protection for vulnerable passengers, including children, pets, and elderly occupants.

Marketing Objectives

In-Vehicle Heat Mitigation System Mission and SMART Goals

In-Vehicle Heat Mitigation System objective is to be the highest requested add-on car part across the nation so we can help everyday people save lives. The In-Vehicle Heat Mitigation System mission is to keep people safe. We want to be able to do this while maintaining the pricing rather conservative so the customer can afford to help their families stay cool. While we have our financial goals for the year it is substantially more important for us to also reach our non-financial goals in the following years. We as a company have decided to make a steep impact on car-related deaths due to heat exposure. In Addition, In-Vehicle Heat Mitigation System will actively search for manner to be environmentally friendly.

Financial Goals

1. Revenue Growth (12–18 Months)

Build brand awareness and credibility to achieve $1 million in gross revenue from online sales, partnerships, and direct channels within 12–18 months.

- Specific & Measurable: $1M in gross revenue.
- Attainable & Realistic: Through digital marketing, nationwide safety campaigns, and strategic partnerships.
- Time-Bound: Within 18 months of launch.

Non-Financial Goals

1. Increase Market Penetration (10-Year Goal)

Achieve adoption of the In-Vehicle Heat Mitigation System as a standard feature or accessory in at least 30% of new cars globally by 2035.

- Specific & Measurable: 30% global new-car adoption.
- Attainable & Realistic: Through partnerships with major automakers.
- Time-Bound: By 2035.

2. Reduce Heat-Related Vehicle Incidents (10-Year Goal)

Partner with safety organizations and expand awareness campaigns to reduce heatstroke deaths in vehicles by 70% worldwide by 2035.

- Specific & Measurable: 70% reduction in heatstroke deaths.
- Attainable & Realistic: Through education, partnerships, and community programs.
- Time-Bound: By 2035.

3. Expand Global Market Presence (10-Year Goal)

Expand distribution to 50 international markets including Canada, Mexico, Australia, Japan, and key European countries by 2035.

- Specific & Measurable: Presence in 50 markets.
- Attainable & Realistic: Through global partnerships and expansion plans.
- Time-Bound: By 2035.

4. Product Development & Customer Engagement (12–18 Months)

Refine the prototype, expand production capacity, introduce limited-edition options, and publish safety outcomes to demonstrate measurable safety improvements and build trust.

- Specific & Measurable: Product refinements, production expansion, customization options, safety data publication.
- Attainable & Realistic: Through continuous R&D and supply-chain management.
- Time-Bound: Next 12–18 months.

Research Needs

The In-Vehicle Heat Mitigation System requires market research to ensure that our product is priced, positioned, and promoted successfully to a safety-conscious audience. Research is crucial because it can provide insights into real consumer concerns, including perceived risks, willingness to pay, and feature preferences. This is a key factor because the product addresses solutions for high-risk, high-emotion problems, such as dangerous cabin temperatures that can endanger children, pets, and anyone vulnerable. Market research also guides our messaging strategy, guaranteeing that the In-Vehicle Heat Mitigation System is introduced as both a preventive safety solution and an expedient, everyday tool. Our product market research objective is to minimize uncertainty and provide evidence-based support for the marketing plan. We plan to research forecast demand, gauge early consumer interest, and estimate the

success of marketing activities following the product launch. Understanding the urgency and size of the problem we are trying to create a solution for is fundamental to market research.

Research Goals

The research process includes understanding the target demographics and incentives. The goal is to evaluate the strength of our consumers' emotional needs and establish what product features create the highest perceived value. The In-Vehicle Heat Mitigation System addresses a critical matter of personal safety, and one main objective is to measure the level of fear, concern, and urgency of consumers associated with car safety risks. This involves recognizing the preventive measures that parents, pet owners, and elderly caregivers take, as well as their awareness of the dangers associated with elevated temperatures in vehicles. Pinpointing purchase triggers is another research goal, which includes figuring out how often people drive with children or pets, the time spent in hot climate regions, or prior experiences involving overheated vehicles.

The second objective is to identify how consumers evaluate competing or substitute solutions. Obvious methods like cracked windows, sunshades, or remote-start features are easy solutions that many parents or pet owners rely on. The goal of our research is to determine whether consumers view these solutions as enough, if they understand the limitations, and how interested they would be in adopting an active smart-cooling product. Another major goal is pricing preferences. This includes figuring out what prices are reasonable for consumers and what they consider a comfortable price for spending on a safety preventive device. Lately, we want the research goals to focus on measuring brand trust factors, identifying barriers to purchase (concern about battery, installation, or skepticism), and strategies for communicating reliability, reassurance, and the preventive value of the In-Vehicle Heat Mitigation System.

Primary vs Secondary Research

The planning process also includes primary and secondary research. Primary research consists of short interviews, surveys, and focus groups with pet owners, elderly caregivers, and parents. We can distribute surveys through social media platforms like Facebook or even schools. This is where we can find Facebook groups and pet-owner online communities. These groups are essential for identifying interest levels, desired features, and preferred price ranges. Interviewing parents or pet owners will give insight into their safety concerns and determine whether proactive protection or convenience is a demand. We can test messaging concepts, which would include phrases like "protect your loved ones", "non-idling cooling", and the goal is for is for our consumers to feel peace of mind.

The secondary research goal is to support and tie up primary findings. Data on hot-car incidents, safety statistics, and temperature rise studies from state health departments or academic sources. Research on car tech tools and market trends is also data to take into consideration. The U.S Department of Transportation, the National Highway Traffic Safety Administration (NHTSA), and the American Pet Products Association are sources that help research a range of different demographic groups and gather data. Customer behavior, regulations, competition, and industry challenges will also help identify gaps in the automotive safety accessory market. The purpose of these approaches is to secure a clear and complete grasp of both the statistical and emotional factors involved in the issue.

Types of Research: Exploratory, Descriptive, and Casual

Exploratory, descriptive, and casual research are essential for the In-Vehicle Heat Mitigation System. Starting with exploratory research, it helps guide product positioning and research uncovers unmet needs and any emotional triggers. One way we can do this is by holding informal meetings about experiences with car heat. Another option is doing observational research where we would conduct parking lots and observe how parents or pet owners manage heat buildups. We also need to figure out how each factor plays a role, which is where descriptive research comes into play. Creating surveys and taking statistical measurements is crucial because we need to decide what is an appropriate price for consumers and how frequently consumers park in the direct sun. To determine which decisions will create the best outcome for the In-Vehicle Heat Mitigation System, we need to include casual research. We can run A/B tests regarding different pricing to determine which maximizes clicks or conversions. We could also test different types of messaging, emphasizing child safety, comfort, or vehicle longevity. Casual research guarantees that our decisions are evidenced based instead of intuitive; this can help build confidence and trust with our audience.

Research Tools and Methodologies

Some accessible research tools include Google forms and Qualtrics for surveys, focus groups through zoom breakout rooms, testing kits to receive feedback, social media analytics, heat sensors or temperature tracking devices through product testing, and competitive analysis matrices which could help compare pricing, safety, and endurance. These tools help provide research at a low cost and are both qualitative and quantitative.

In-House vs External Research

Most of the in-house research is conducted internally and helps our product stay connected to customer needs. For example, social media advertising tests, competitive analysis, surveys, and social media advertising tests. We can distribute surveys when customers sign up for our product or include their email. Social media advertising tests can help us determine which

platform reaches the most public interest. External research is a higher cost and requires outside support but also adds credibility and accurate technical claims. We would need access to proprietary industry reports, legal research on compliance with child safety regulations. Engineering tests to ensure temperature reduction effectiveness would also be essential.

Incentives for Research Participants

To attract sufficient, we could offer small gift cards, discount codes for the final profits, free early access for prototype testers, and entry into a raffle for more discounts or gift cards. All these strategies are effective and affordable for increasing participation rates. Research will also help ensure the success of the marketing plan. After the launch we have to keep track of customer satisfaction scores and average ratings. Determine what causes repeat purchases or referrals, especially families. The goal is to establish what is the best social media sentiment towards the products and brand, reduce perceived risk for pet owners and parents, and compare secondary research benchmarks, including industry growth in safety device sales. These measures help ensure the marketing plan remains data driven and adaptable.

Target Market

The target market for the In-Vehicle Heat Mitigation System is safety-conscious adults between the ages of 25 and 65 who often drive in hot climates and manage busy, family-centered routines. This group mainly includes parents with children ages 0–12, pet owners, and adults caring for elderly family members. The National Highway Traffic Safety Administration explains that heatstroke among children and older passengers remains a serious concern in the United States. The U.S. Census Bureau also reports that more than 37 million households include children, showing how many families face this risk during everyday travel. These consumers typically earn between $55,000 and $120,000 a year and have some college education, a bachelor's degree, or a professional certification. Their day-to-day life is pretty busy doing things like commuting to work, dropping kids off at school, running errands, or working shifts that often require leaving the car out in the sun for long periods. As shown in figure 2, NOAA's National Weather Service explains that pregnant women, newborns, children, chronically ill and elderly adults are among the most heat vulnerable groups, which increases the need for a solution that reduces extreme interior vehicle temperatures.

In terms of who interacts with the product, the buyers are mainly adults who manage most of the day-to-day responsibilities in a household. This includes parents, caregivers, pet owners, and gig economy drivers who spend long hours in their vehicles and value anything that makes their routines safer and easier. The people who benefit from the In-Vehicle Heat Mitigation System, however, are often pregnant women, newborns, children, pets, chronically ill and elderly passengers. These individuals are the most vulnerable to heat, even though they are not the ones making purchasing decisions. There are also groups that influence how these buyers

choose safety products like parenting bloggers, pet care communities, safety organizations, and online reviews all play a role in shaping what consumers trust and what they end up purchasing.

When we look at segmentation, these consumers value convenience, peace of mind, and safety which fit well with the Achievers segment who prefer practical, reliable, and technology supported tools that make their busy routines easier. They also tend to check reviews, compare brands, and choose products that offer features such as alerts, monitoring, and app connectivity. In addition, many of the customers who use this product live in hotter parts of the country, especially places that deal with very high temperatures for long periods of time. A lot of them are in the Sun Belt states, such as Arizona, Texas, Florida, and Nevada, where parked cars heat up very quickly. There are also customers in states like New York, Illinois, and New Jersey, but mostly during the summer when the heat becomes a problem.

From a broader market description standpoint, national data shows a large potential customer base. According to the U.S. Department of Transportation, the United States has over 288 million registered vehicles, which creates a wide foundation for possible buyers. Rideshare and delivery drivers add another layer of opportunity. The Pew Research Center presents data showing that 2–3 million Americans work as rideshare or gig-economy drivers, and many rely on providing a safe and comfortable environment for passengers. When combining families, pet owners, gig workers, and regular drivers in warmer regions, the estimated addressable market reaches around 100–150 million heat-exposed consumers who would benefit from a dependable parked vehicle cooling product.

These factors together show why a product like the In-Vehicle Heat Mitigation System fits well with their needs. These consumers care about safety, responsibility, and convenience, so they usually go for products that help them avoid risk and keep children, pets, and elderly passengers protected. Hot weather makes their daily routine even harder, and people know that a parked car can heat up fast, so simple things like sunshades or cracking windows don't really feel reliable anymore. The In-Vehicle Heat Mitigation System positions itself as a practical, non-idling, technology supported cooling solution designed for families and busy drivers who need consistent protection in high heat environments. Its differentiation comes from offering real value through app-based monitoring, safety alerts, and controlled temperature reduction, which are features that typical low-cost options do not provide. Because of this, the market is likely to adopt it over time as a dependable and everyday safety tool.

Marketing Mix (4Ps)

Product Strategy

A strong product strategy is essential for positioning the In-Vehicle Heat Mitigation System as a credible, trustworthy, and innovative safety solution that addresses a widely recognized consumer pain: dangerous in-vehicle heat. The objective of our product and brand management approach is to develop a solution that not only prevents heat-related risks but also communicates safety, convenience, and control as part of its long-term brand promise.

The In-Vehicle Heat Mitigation System is currently in the Introduction phase of the Product Life Cycle (PLC). As a new entrant in an emerging category of proactive vehicle-cooling and temperature-monitoring devices, our focus is on building awareness, educating potential customers, demonstrating value, and laying the foundation for scalable growth. Marketing and brand strategies at this stage prioritize visibility, adoption, and establishing credibility in a market where consumer understanding of smart cooling solutions is still developing.

Our approach incorporates the three levels of the product:

- Core Product: The fundamental benefit is safety and protection from dangerous cabin heat. This addresses both functional needs (temperature reduction, battery-safe operation, cross-vehicle compatibility) and emotional needs (peace of mind, reassurance for families, pet owners, and caregivers).
- Actual Product: The In-Vehicle Heat Mitigation System is an app-connected, non-idling cooling device with optional solar assistance, user-friendly interface, and responsive cooling technology. It delivers measurable performance and reliable operation.
- Augmented Product: Services and features that enhance value, including installation guidance, customer support, safety verification, updates through app integration, and warranties, all reinforcing trust and long-term satisfaction.

Branding and Packaging are central to communicating the In-Vehicle Heat Mitigation System's value. The brand will be positioned as smart, responsible, and safety-focused, emphasizing credibility and trustworthiness. Messaging will highlight verified cooling performance, energy efficiency, and cross-vehicle compatibility. Packaging will reinforce these values through clear, informative labeling, visually communicating safety benefits, simplicity of installation, and the product's technology-forward design. To achieve these goals, we will market our logo (Figure 3) and slogan "Stay Cool. Stay Safe. Stay Connected." emphasize the product's ability to prevent dangerous heat strokes and act as a responsible, app-controlled safety device.

The core management objective is to create a product that delivers tangible safety benefits while remaining intuitive for diverse audiences, targeting the vulnerable population (Figure 2.)

By prioritizing simplicity, trust, and credibility, and integrating user-friendly technology, credible partnerships, and emotional reassurance, the In-Vehicle Heat Mitigation System aims to establish itself as a recognized and reliable safety accessory. Over time, the brand strategy will support sustainable growth, reinforcing a long-term promise of protection, convenience, and peace of mind.

Pricing Strategy

For our In-Vehicle Heat Mitigation System, we decided to use two approaches to come to a conclusion about the price. This product ranges from $50 to $80 depending on whether or not the customer decides to add extra features. The price evolved from a value-based and cost-based approach.

A value-based approach as we know is a customer focused strategy that allows businesses to determine pricing based on how much they believe customers are willing to pay, rather than simply factoring in production costs. We decided that this was the right approach for our product because it is meant to be an affordable safety item, not a luxury. We hope most people can invest in this product to prevent heat strokes and increase their safety. The price range of $50 to $80 keeps it affordable for middle-income families while still showing excellent quality and useful features to back up the price. Value-based pricing must be accompanied by an approach to logic. Bundle discounts will be offered for families or individuals with more than one car to encourage adoption and loyalty as well. Ultimately, this plan helps keep the product fair, affordable, and trustworthy for customers who may feel this item is a necessity. This brings us to our next point of how we determined the “floor” price. This makes a minimum (plus cost) the safest and most correct for the business.

Aside from value-based reasoning we also used a cost-plus approach. This approach helped us determine a fair price for us to make profit as a growing brand. A cost-plus approach calculates the costs of what it took to make the product (location, labor, transportation) and adds a fixed markup for profit. We decided that this approach was the easiest for determining a price range for the In-Vehicle Heat Mitigation System because it required of us a total cost and desired profit margin. As a new company, the cost-plus approach allows us to feel secure, have profit assurance, and less risk of losses.

Since we used both a value-based approach and a cost-plus approach it was important we remembered and valued why we chose these approaches as well as how they work well with one another. Using both of these strategies makes it easier for us to price our items in the future as we grow. The cost-based approach helped us determine a minimum. This minimum can and will be affected by the consumer’s reactions therefore causing us to move on to a value-based approach in order to price our item based on how much consumers value it. Both

value-based and cost-plus approaches help us as a company, justifying price increases. They will value our transparency by demonstrating the costs of our item and how their perceived value may be an addition to the total price.

Place (Distribution Strategy)

The place strategy, also known as the distribution strategy, would encompass different distribution strategies depending on the phases in which the product has grown and been integrated into the consumer market. Initially, during its new and primarily launched phase, it would be based on internet sales. Corresponding with mainly focusing on internet promotion strategies, the best way to break a product similar to ours into the market is to use the internet as a tool for exposure and for a wide variety of consumers, some consumers that may not have even been seeking this product will be able to buy it easily, just a few clicks away. Mobile devices now account for 57% of global ecommerce sales in 2024 and an estimated 59% in 2025, according to a study by Red Stag Fulfillment. People enjoy buying new products, especially online, when their window of deciding to buy the product and buying it is smaller. Some do it impulsively, which is an edge that we could also use. A In-Vehicle Heat Mitigation System is a new product in a new market, and the diversification aspect of it can excite people and yield more consumers. Using direct-to-consumer channels is the best way to initiate and boost sales for new products, maintain a presence, and accelerate scaling. Amazon Marketplace would be the main platform utilized to distribute this product, as well as our personal website, during this early growth phase.

When the popularity of this product increases and we have established a solid consumer audience and presence on Amazon, we will expand to using in-store retail. This would allow buyers to directly buy the product and would be more accessible, depending on the selected locations. During the mid-growth phase, smaller retail locations that specialize in car products would carry our product, as more popularity could still be acquired. For example, AutoZone or O'Reilly's. Although these are large companies and would be helpful for our growth journey and sales, they are smaller compared to the major retailers we would eventually aim to join our products with, during the late growth/ established phase.

Major retailers like Target and Walmart would objectively be the strongest distribution channel, and one that we would be inclined to maintain and stay with for the majority of our future sales. We would continue to sell our product through internet sales and in smaller retail stores. However, major retailers are the long-term goal and the ideal position for distribution for this particular product. It reaches more consumers and creates more legitimacy for the product, as these major retailers are trusted sources. The distribution of the product, the In-Vehicle Heat Mitigation System, will change through its product life cycle (PLC). Its change will be dependent on factors such as changes in market demand, consumer competition, season, and maturity. This product is new and has a new market. When the product becomes successful, competition

will arise and we will try to copy this product and innovate it in a way that surpasses our sales. This attempt will dip our sales, but we can also innovate the product to keep up competition. Our product's sales depend on the season. In the summer, our sales are expected to go up because the In-Vehicle Heat Mitigation System was built for the hot season. We can expect dips in sales during the winter season, as the product becomes less needed if it's cold outside. Lastly, the maturity of this product can create a decline in sales as many people will have bought this product, deem it unnecessary, or the product is at its full potential and cannot be able to be innovated to fit changing market and consumer demand.

Promotion Strategy

The promotion strategy for our In-Vehicle Heat Mitigation System will focus on communicating a clear, emotionally resonant message: safety, comfort, and peace of mind. Our slogan, "Stay Cool. Stay Safe. Stay Connected," will emphasize the product's ability to prevent dangerous in-car heat, act as a responsible safety tool for families and pet owners, and provide convenient smartphone-based control. Supporting messages highlight its compliance with anti-idling laws, its eco-friendly operation, and its ability to offer proactive alerts and real-time monitoring. The emotional tone of the campaign is intentionally reassuring and action-oriented, focusing on responsibility and proactive safety rather than fear.

To reach our target markets, the promotion will rely heavily on digital and social media because these channels match current shopping and consumption patterns. Platforms such as TikTok, Instagram, and Facebook will be used for short-form demonstrations showing how quickly a vehicle heats up and how the In-Vehicle Heat Mitigation System responds. Influencer partnerships with pet-safety advocates, parent educators, veterinarians, and animal shelters will strengthen credibility. Amazon advertising and Google search ads can capture consumers actively searching for heat-safety solutions, especially since Amazon is one of the product's primary launch platforms. In-store retail promotion will grow over time, including displays at auto dealerships, pet stores, and major retailers such as Target or Walmart, consistent with our distribution strategy.

Promotion will vary by the product life cycle to ensure relevance and efficiency. During the introduction stage, the focus will be on building awareness, trust, and understanding of what the product does. Messaging will highlight the core problem in how rapid temperature rise in parked cars and the product's preventative capabilities, supported by influencer demos, educational content, and safety partnerships.

Works Cited

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