



ALZI

VOICE FOR CARE, ALZI UNDERSTANDS

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2024 Dempsey Startup Competition

Customizable AI Companion Chatbot:

Engages with patients and reports back to caregivers.

Conversational Cognitive Training:

Cognitive training sessions injected into chatbot conversation.

Comprehensive Monitoring Tools:

Track and manage cognitive health effectively.

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Concept

Alzheimer's is a devastating disease that not only strips individuals of their mental faculties and independence, but also places a heavy financial burden on their families who often have to either bear the cost of care or become caregivers themselves. **Alzi** is a digital platform created to alleviate the challenges faced by family caregivers of individuals with early-stage Alzheimer's dementia. By offering companionship through an AI chatbot that simultaneously provides conversational cognitive training, Alzi empowers caregivers with tools to monitor their loved one's mental state and helps reduce their loved one's feelings of loneliness.

Need

Each year, over **55 million families worldwide** face the daunting task of caring for a loved one with Alzheimer's dementia (AD). In the United States alone, 7 million Americans are affected by AD, and this number is projected to double by 2050. The disease significantly impacts families, with 83% of assistance for older adults provided by **family members or unpaid caregivers**. About 70% of dementia caregivers find coordinating care stressful, and two-thirds struggle to access necessary resources and support.

As Alzheimer's disease becomes more prevalent, the need for professionals to support individuals with dementia and their families is growing. Between 2021 and 2031, over **1 million additional direct care workers will be needed** to meet the demands of the increasing dementia population, representing the largest worker gap in the U.S.

Caregivers, despite their new responsibilities, still have jobs, children, and other obligations. How can they manage everything at once? There is a critical need for developing and ensuring the availability of effective tools and devices. The current market lacks adequate options, underscoring the urgent need for innovative solutions that prioritize the well-being and comprehensive care of both patients and their unpaid caregivers.

1 in 9 adults aged 65+ suffer from Alzheimer's Disease



83% of care provided by unpaid family caregivers, who are mostly women



2023 Dementia healthcare costs in US were \$345 billion



Solution

When the early-stages of AD begin to manifest in a patient, it can be challenging and emotional for families and caregivers to gauge the severity of cognitive decline. Alzi provides a digital platform designed to provide AD patients with an **AI chatbot for companionship** and give caregivers a new way to **monitor their loved ones' cognitive state**.



For the Patient

Alzi offers patients a chatbot that is easily accessible through spoken language and compatible with wearable devices, smart home systems, or screens. Our chatbot will engage patients in conversations that both **assess their memory** and **provide companionship**. All interactions with the chatbot are recorded and tracked over time. Caregivers can personalize the chatbot's questions using a simple mobile application. Alzi also tracks and **reminds patients to complete daily tasks** during conversations, such as taking medication and using the bathroom. Additionally, the chatbot engages in conversations designed to act as **basic cognitive training**, prompting the user to recall information and stimulate their memory.



For the Caregiver

Alzi allows caregivers to customize care for their loved ones through a straightforward mobile app. Caregivers can create a set of **personalized chatbot questions**, such as "Where do you live?" or "What is your daughter's name?" These questions are asked by the chatbot, and the answers are automatically tracked. Caregivers can review the chat history and gain quick insights into how a **patient's responses change over time** with our data dashboard. Alzi removes the guesswork and uncertainty from early-stage AD, enabling caregivers to act swiftly and make informed, data-driven decisions about their loved ones.

Research Validation

Cognitive training, in the context of AD treatment, focuses on methods and interventions that support maintaining and enhancing cognitive functions. This includes various educational approaches aimed at managing behavioral symptoms, reducing overall symptoms of the disease, and ultimately improving the quality of life for individuals affected. Such treatments are integral to helping patients retain as much independence as possible and prolonging effective engagement with their surroundings.

One of the most widely used cognitive status evaluations for AD patients is the Short Blessed Test (SBT) scoring. The SBT typically comprises six items, each scored to assess the severity of cognitive decline. Alzi is inspired by the SBT scoring and focuses on three key areas:

- **Orientation** - Assesses the patient's awareness of time, place, and person, helping to determine their ability to stay grounded in reality.
- **Reminiscence** - Tests both short-term and long-term memory capabilities, crucial for daily functioning and quality of life.
- **Concentration** - Evaluates the patient's ability to focus and sustain attention, which affects their ability to perform tasks and engage in conversations.

Our cognitive training AI chatbot can aid caregivers and healthcare providers in **tracking the progression of Alzheimer's** and evaluating the effectiveness of implemented cognitive training sessions.

Behavior Tracking and Reporting

Tracks daily activities, generating reports to help caregivers understand routines and detect health issues.

Daily Task Reminder

Provides reminders for medication, appointments, and daily tasks.

Location Tracking

Uses GPS to track the patient's real-time location, ensuring safety for those prone to wandering.

Emotion Monitoring

Analyzes voice tone to detect patient's emotional states.

Customization

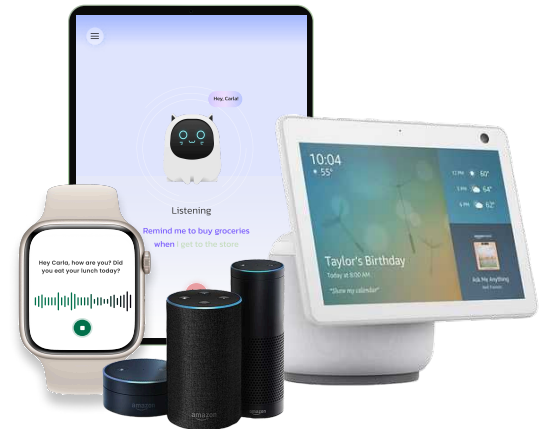
Adjust chatbot question database according to the patient's history and preferences.

Cognitive Status Analysis

Provides cognitive health tracking through personalized exercises and tests.

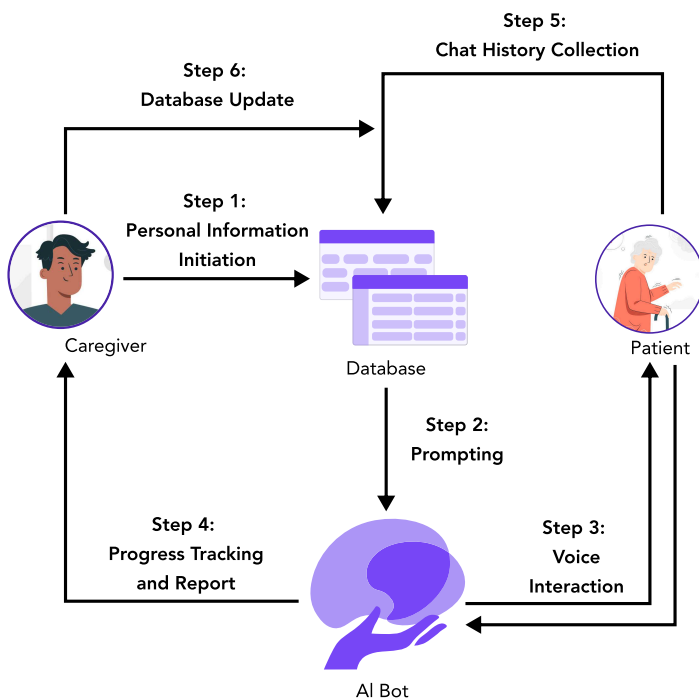


"Hi Ben, do you remember what is your daughter's name?"



Voice Integration with Smart Devices:

Integrates with smart devices to assist Alzheimer's patients with memory enhancement, reality orientation, and cognitive training through conversational interactions.



Step 1: Personal Profile Initiation - The caregiver inputs patient information for initial setup, allowing the chatbot to tailor its interactions for the patient.

Step 2: Prompting - Based on the provided patient information, Alzi creates chat sessions that effectively engage and assess the patient.

Step 3: Voice Interaction - The patient interacts with the chatbot via a smart device, with data continuously collected and then showed in the caregiver's dashboard.

Step 4: Progress Tracking - Alzi analyzes the collected data and creates comprehensive reports, highlighting key findings and cognitive domains that need improvement.

Step 5: Chat History Collection - Chat histories between the patient and the chatbot are stored to track progress.

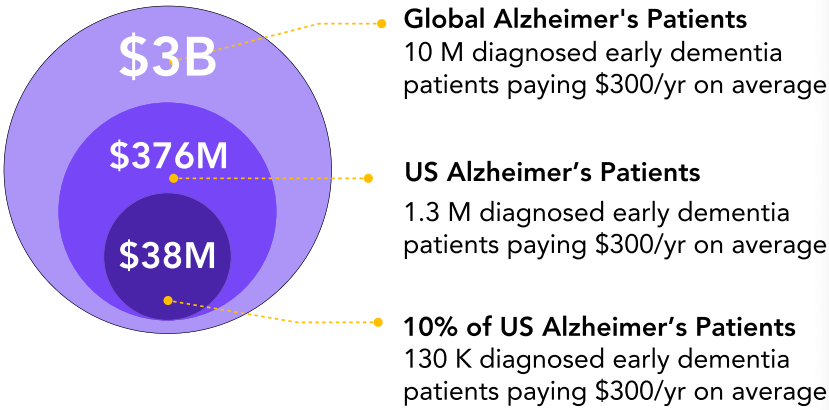
Step 6: Database Update - Based on the reports and chat history, Alzi allows the caregiver to adjust prompting database as needed.

Market Overview

Market Size

The global mental health market was valued at \$375B in 2022 and is expected to reach \$532B in 2030 with a CAGR of 3.85%. The dementia care products market size is expected to be worth around **\$44 billion by 2032 from \$22 billion in 2022**, growing at a CAGR of 7.2%. Additionally, in 2022, the estimated healthcare costs associated with Alzheimer's treatment were \$321B with \$81B out of pocket. Long-term care including nursing homes and home healthcare account for a majority of these costs.

Economic Opportunity





Age: 65-75



Age: 20-55

Income: Low to Middle Class

Psychographic:
Comfortable with Voice Assistant

Psychographic:
Overwhelmed and burnt out from job and caregiving duties

Target Market

Our product is designed to help caregivers caring for diagnosed Alzheimer's patients with early stages of Alzheimer's dementia. These are individuals who still live in their homes or with their families but require assistance with activities of daily living.

In 2020 an estimated 10 million people worldwide were living with diagnosed mild to moderate Alzheimer's dementia. Assuming the caregiver for every one of these individuals was a customer, with 70% on the basic tier (\$19/month) and 20% on the premium tier (\$59/month), we estimate a Total Addressable Market (TAM) of \$3B annually. In the United States, there are 1.3M diagnosed people living with these symptoms giving an estimated Serviceable Available Market (SAM) of \$376M annually. Assuming we can capture 10% of the diagnosed population in the states with highest prevalence of AD in the US, we estimate a Serviceable Obtainable Market (SOM) of \$38M annually.

The dementia care products market is dominated by long-term care centers, which are the main consumers of these products due to their comprehensive services for patients. Home care products are designed to support in-home care and patient comfort. Other facilities, like community centers and clinics, also contribute to the market by offering direct support and resources for dementia care.

Market Validation

We have already conducted extensive user research by interviewing several dozen Alzheimer’s family caregivers, care managers, and directors from long-term care facilities in WA and CA. Our findings validated the current adoption and willingness among AD caregivers to use smart technology solutions for companionship, cognitive stimulation, and improving recall abilities. Existing surveys also show that a significant population over 65 years old has voice assistant devices in their homes. Specifically, Amazon's Alexa emerged as one of the most highly utilized voice assistants[Fig 1]. Other research also reveals that **nearly 50% of caregivers and elderly individuals frequently use voice assistants** on a monthly basis [Fig 2]. These insights underscore the general familiarity and receptiveness of our target users towards voice-enabled smart technology solutions. With a substantial portion of the elderly already accustomed to interacting with voice assistants like Alexa, the caregiving community demonstrates a readiness to embrace Alzi.

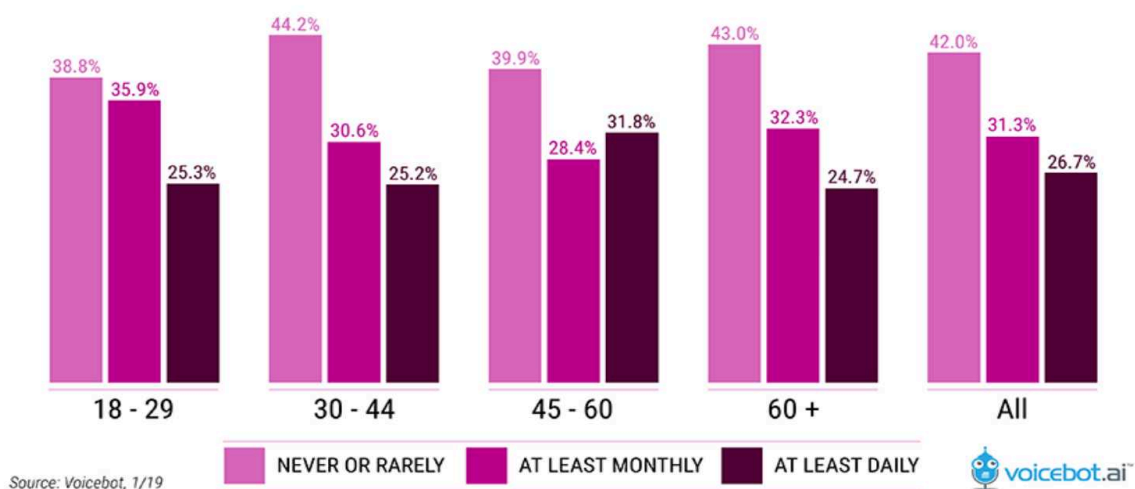


Fig 1: Commonly used voice assistants in the United States in 2021, by age group

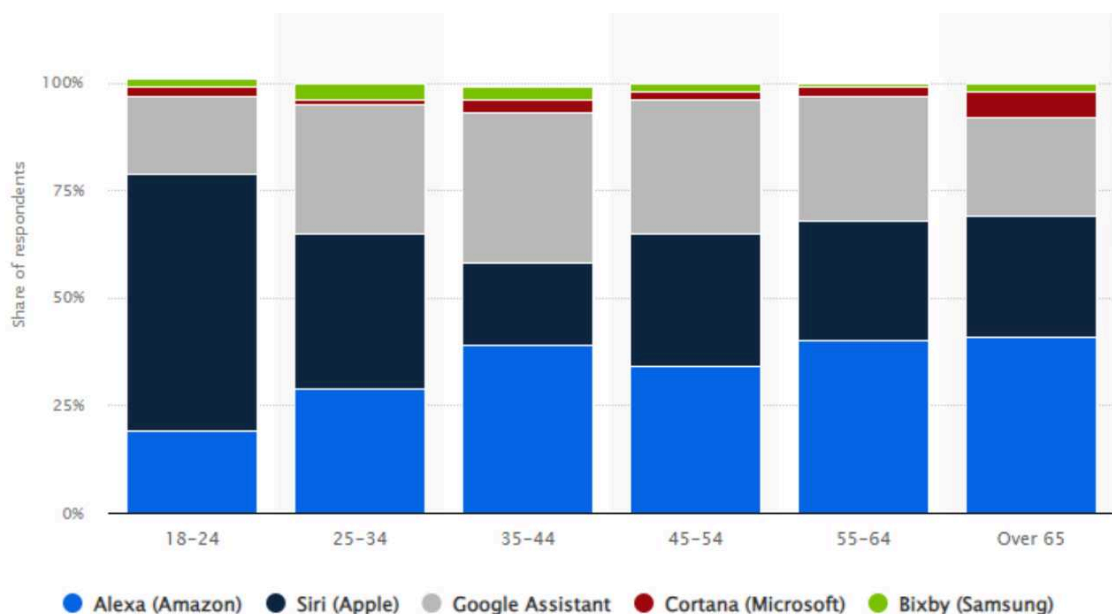
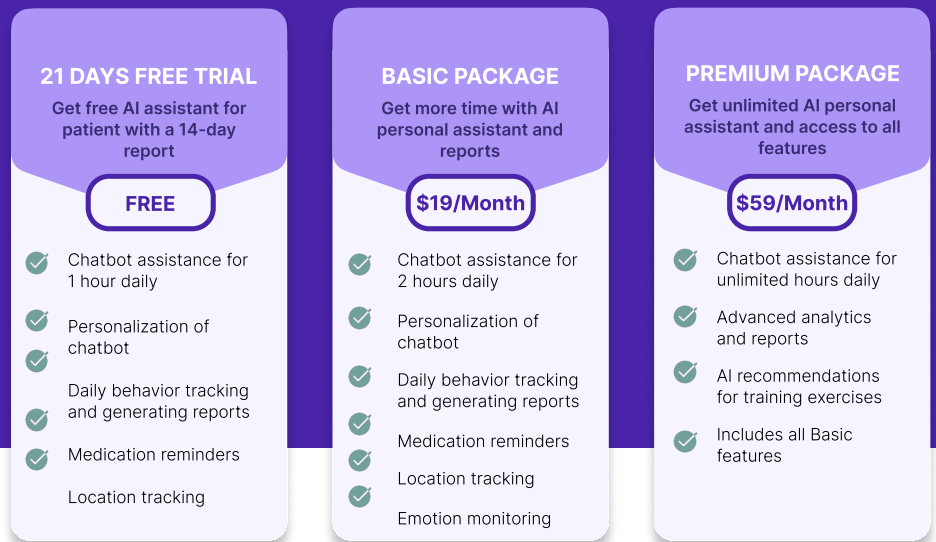


Fig 2: Frequency of Smart Speaker Use in 2020

Business Model

Alzi uses a **tiered subscription based model** with a 21-day free trial designed to meet the varying needs of users while ensuring accessibility and affordability.



Pricing Policy

Our pricing policy is designed to foster initial user adoption and ensure long-term profitability. We implement a tiered subscription-based model with the following dynamic changes:

- **Early phase:** During our first year, we aim to attract users and capture market share by offering affordable competitive pricing compared to other software solutions. By providing comprehensive monitoring and customizable features tailored for caregivers, we stand out in the market compared to other competitors who primarily cater to patients.
- **Developing phase:** In the fourth year, we will expand the user market across US, while offering more advanced features. This increase will help us achieve greater profitability, enabling continued investment in research and development and supporting the expansion of our customer base. Additionally, the increased revenue will support the expansion of our customer base and scaling operations, thereby sustaining long-term growth.
- **Enterprise Discounts:** We plan on offering enterprise discounts to memory care centers and insurance companies when they purchase year-long subscriptions for their patients and users. Our product will provide value to these businesses by allowing caregivers to share detailed information about their loved ones with doctors. This information can help doctors make more immediate decisions about treatments for a patient.

Competitive Analysis

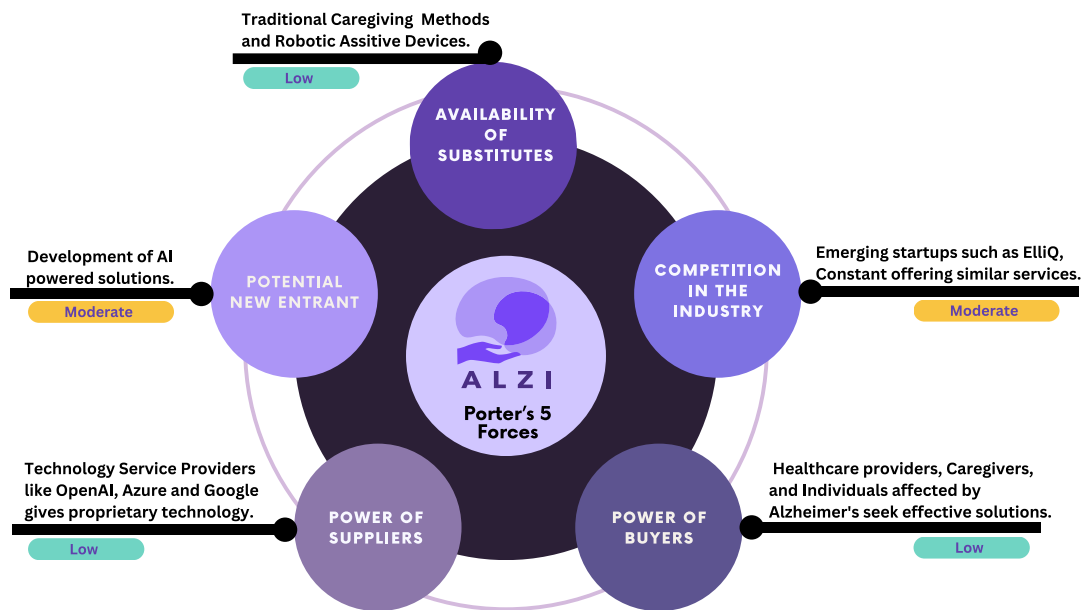
After an in-depth market analysis, we evaluated four main types of competitors within the Alzheimer's caregiving app domain: caregiver tracking and reminder systems, cognitive games (Lumosity and AmuselT), companion robots (ElliQ), and cognitive therapy apps (Constant Therapy). Our findings underscore Alzi's distinctive advantages in providing a holistic and personalized care approach.

Our Advantages(✓):

1. **Personalized Care and Integration:** Alzi goes beyond standard brain training games such as Lumosity and AmuselT by offering personalized conversations with users based on their interests (as identified by the caregiver) and cognitive training that adapts over time to the user.
2. **Affordable and Engaging Care:** Alzi is a low-cost, engaging AI product that complements traditional care methods, and increases caregiver bandwidth.
3. **Proactive Health Monitoring:** Alzi provides caregivers with comprehensive mental health analytics, offering valuable insights into patients' mental health that can guide care planning and signal the need for timely medical intervention.
4. **Enhanced Safety Features:** Prioritizing patient safety, Alzi incorporates reliable safety tracking features like position monitoring, which are not typically found in cognitive therapy apps like Constant Therapy or in robotic companions like ElliQ.

	 ALZI	 Constant Therapy	 ELLI-Q	 VerifyCare	 Lumosity
Cognitive Training	✓	✓	✓	✗	✓
Daily Task Reminder	✓	✗	✓	✓	✗
Cognitive Status Analysis	✓	✓	✗	✗	✗
Personalization	✓	✓	✗	✗	✗
Companionship	✓	✗	✓	✗	✗
Easy Accessibility	Smart home Compatibility	Phone/Web App Only	Tabletop Device	N/A	Phone App only
Safety Tracking	✓	✗	✗	✗	✗

Competitive Threats



Alzi operates in a mixed competitive landscape, necessitating proactive strategies in R&D, partnerships, and grassroots awareness campaigns to mitigate competitive forces. Alzi faces a moderate threat from new entrants, as the rapid development of AI-powered solutions could allow competitors to overtake Alzi's offerings. However, significant R&D investments, an early mover advantage, trade secrets, and research partnerships mitigate this risk. The bargaining power of buyers, such as healthcare providers and caregivers, remains low due to the limited availability of AI-based Alzheimer's care solutions that collect valuable data on the affected individual. The bargaining power of suppliers like OpenAI and Google is also low, as the competitive landscape allows Alzi to pursue multi-sourcing strategies despite some providers' substantial leverage through proprietary solutions. Competition within the industry is moderate, with emerging AI startups and incumbent healthcare providers offering similar services. To address this challenge, Alzi remains proactive in technological advancements and strives for continual improvement, aiming to be the most affordable and innovative solution in the market.

Technology Development Strategy

Our product is divided into two main interfaces, the caregiver reporting dashboard and the patient voice chat. Both of these interfaces rely on a **proprietary chatbot prompting architecture** that will be developed to provide lifelike yet structured conversations with patients while providing analytics that can be shown to the caregiver. We are currently experimenting with the latest open-source large language models (LLMs) to determine which is the most capable of asking patients questions without confusing them or sounding like an interview. To achieve this we are designing a robust prompting system that will significantly alter the base LLM and make our chatbot experience much different from the assistant experience that the popular LLMs provide. To make this chatbot accessible to the patient we will be developing small platform-specific applications that simply collect voice interactions from the patient and send them to our LLM chatbot in the cloud. The initial platforms we plan on developing these patient interfaces for are **Amazon Alexa, Google Home, and Apple's Watch OS**. The initial caregiver dashboard will be a web application that can be accessed from desktop or mobile devices.

During the first two months, we will develop the chatbot architecture while simultaneously conducting usability testing with Alzheimer's dementia patients. We will recruit test subjects through our advisor connections to UW School of Public Health to validate our product. In the next two months, we will provide a free trial for beta testers to gain real-world insights about our product. After officially launching we will simultaneously reach out to memory care researchers to help evaluate the effectiveness of our product and gain academic credibility.

Legal Considerations



Privacy Policy

Alzi takes our users' personal data and privacy very seriously and has **no intention of distributing user data to third parties that are not covered by HIPAA**. We are currently exploring the possibility of selling anonymized data to HIPAA-compliant entities for clinical trials and research purposes, as stated in the "Alternate Revenue Stream" section of this proposal.



Per FDA regulations, any person or company that wishes to perform testing on human subjects in a medical context must obtain authorization from an Institutional Review Board. We are currently working with one of our advisors, John Raiti, to obtain this authorization and begin testing the efficacy of our chatbot system with AD patients. Additionally, we anticipate our device will be classified as a class 1 medical device and exempt from 510(k) premarket notification. In simpler terms, our medical device is only software and there is almost no way that it could cause injury or illness to its user, so the **FDA would not require us receive premarket authorization** before selling it on the open market.



HIPAA

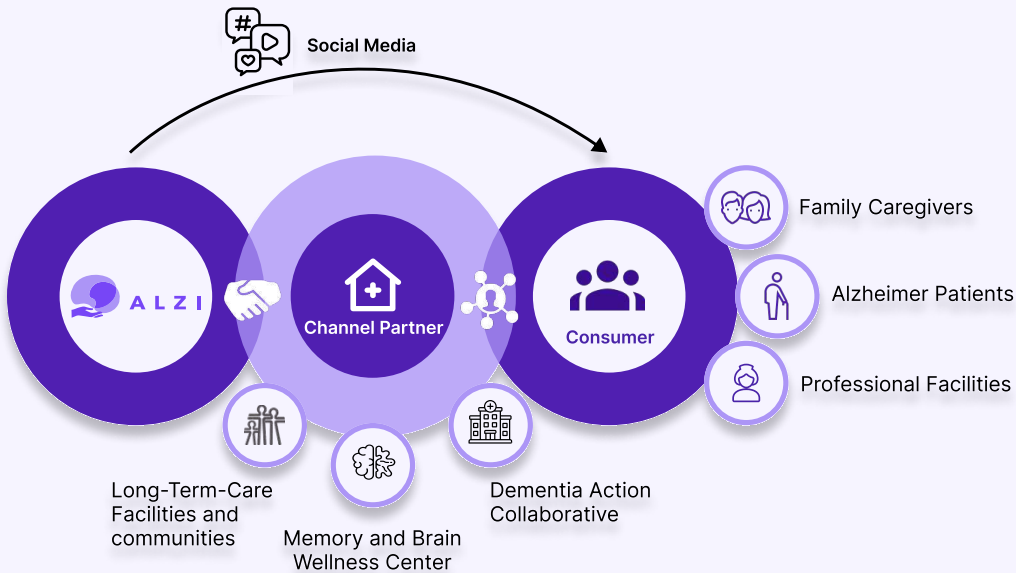
Alzi is not a HIPAA-covered entity and will not technically be required to comply with HIPAA rules and regulations regarding patient data when selling to private patients. However, once Alzi wishes to work with HIPAA-covered entities such as **memory care centers or insurance companies**, we will need to be HIPAA-compliant. Therefore, when building our database infrastructure and hiring employees, we will adhere to industry standard practices. In a nutshell, HIPAA compliance for SaaS products like Alzi requires extensive and deliberate protection of user data including encryption, multi-factor authentication, HIPAA training, and physical security measures on data stores.



Intellectual Property

All of Alzi's intellectual property lies in the **chatbot prompting architecture and prompt recommendation system**. Our prompting architecture will be built upon an already existing LLM but will change the behavior and provide additional analysis on the chatbot responses as well as the patient's responses. Our recommendation system will also analyze the chatbot conversations and recommend new prompts that the caregiver should add to help the flow of conversation and keep the patient interacting with the chatbot.

Go-to-Market Strategy



To establish a foothold in the Alzheimer's care sector, our business strategy revolves around strategic collaborations and grassroots outreach campaigns. Through partnerships with Alzheimer's associations, healthcare providers, and support groups, we aim to enhance our app's credibility and extend its reach to those who stand to benefit the most. We have divided our go-to-market strategy into 3 phases.

Phase 1: Pilot Implementation and Feedback Collection

Alzi will pilot the app within **senior living facilities, hospitals, and clinics across Seattle**. Through future partnerships with healthcare providers such as the UW Memory and Brain Wellness Center, and training sessions for staff, we ensure seamless integration of the app into existing care routines. Real-life stories and testimonials become powerful tools in illustrating the app's benefits, fostering an emotional connection with potential users. This multifaceted approach ensures that Alzi's solution is not only accessible but also resonates with its target audience on a personal level.

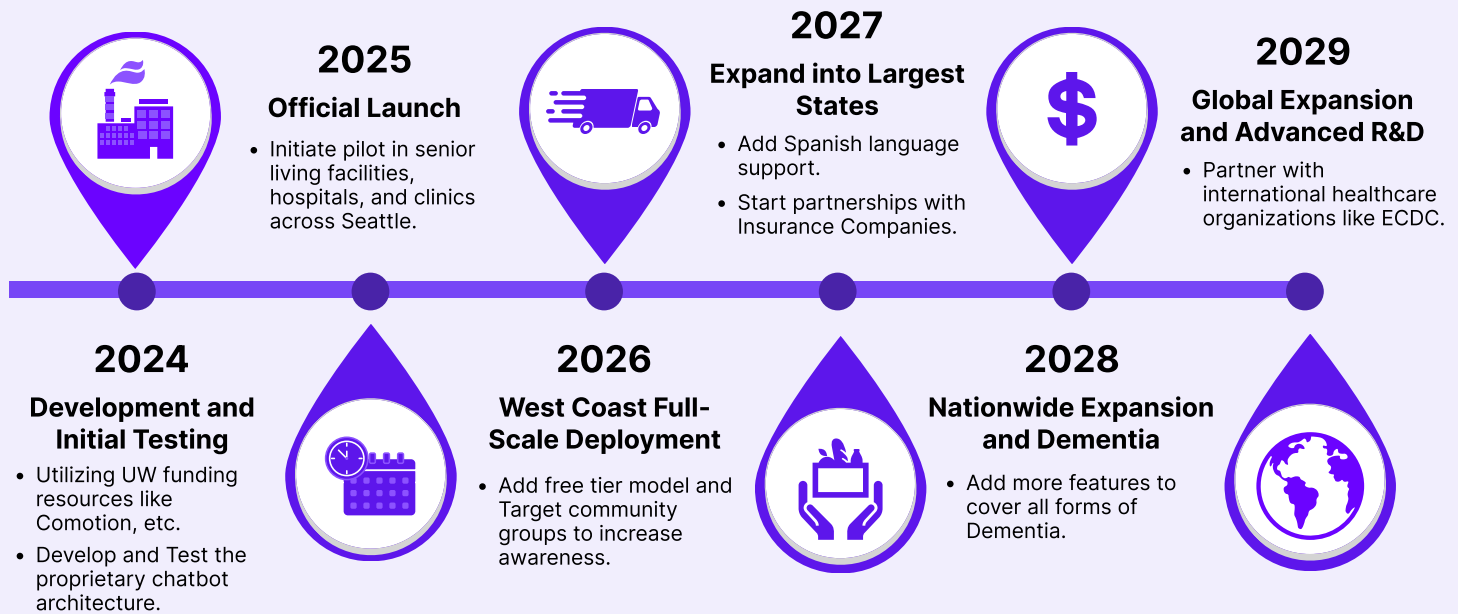
Phase 2: Full-scale Deployment and Continuous Improvement

In the next step, Alzi focuses on full-scale deployment of the app, expanding its reach to a wider audience. Offering an initial free trial period encourages exploration and gathers valuable user feedback. This data-driven approach guides continuous improvement, ensuring the app evolves based on user input. Responsive customer support further enhances user satisfaction and loyalty. We will strategically target community groups to drive awareness and adoption, recognizing their influence in the purchase decision-making process. Leveraging social media platforms and targeted advertising campaigns, we enhance visibility and actively engage with our audience. As awareness grows and adoption rates increase, Alzi becomes a trusted companion for individuals affected by AD and their caregivers.

Phase 3: Integration with The Dementia Action Collaborative

Alzi collaborates with the Dementia Action Collaborative (DAC) to further extend our reach to Alzheimer's patients and caregivers in Washington State. By integrating our app with government resources and initiatives, we enhance the quality of care and quality of life for individuals affected by AD. Alzi becomes an integral part of the comprehensive support network provided by DAC, offering innovative solutions to address the diverse needs of the community. This collaboration not only extends our reach but also strengthens our commitment to making a meaningful difference in the lives of those affected by AD.

Product Roadmap



This roadmap presents a comprehensive timeline for the development, testing, and expansion of our product. The timeline spans from 2024 to 2029, outlining key milestones and strategic goals.

Alternate Revenue Stream

As a result of collecting rich conversational data from Alzheimer's patients at varying stages of the disease, Alzi has an additional potential revenue stream. This unique real-world dataset could be invaluable to **HIPAA-covered entities** like pharmaceutical companies, memory care facilities, and medical researchers.

Pharmaceutical Companies

Each year US Pharmaceutical companies spend \$7B on clinical trials with **\$1.7B spent on patient recruitment**. Tracking the real-world impact of various treatments on patients' cognitive abilities, communication skills, and overall well-being is crucial for clinical trials and FDA approval. By leveraging the conversational data captured through our platform, pharmaceutical companies can gain a comprehensive understanding of how their drugs are performing. This enables them to provide additional methods of validating the efficacy and safety of new treatments.

Memory Care Facilities

We will package and license this conversational data to provide deeper insights into the effectiveness of care practices and therapies. By analyzing daily conversations, cognitive responses, and emotional cues exhibited by Alzheimer's patients during interactions with our chatbot, care professionals can better assess and refine their approach to delivering personalized, high-quality care tailored to each individual's needs. Additionally, this data can be instrumental in monitoring the efficacy of medications on individual patients.

Medical Research

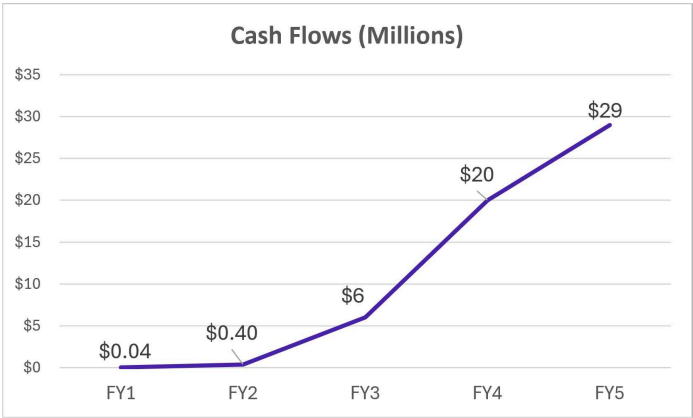
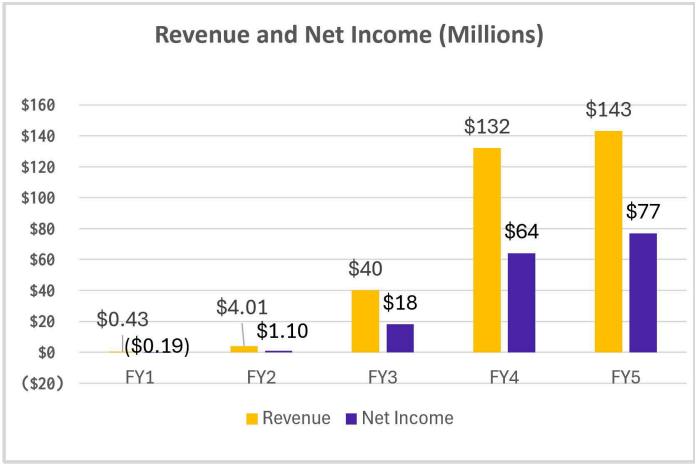
This unique dataset can fuel research efforts aimed at deepening our collective understanding of Alzheimer's disease. By providing researchers with access to real-world conversational data from individuals at different stages of the condition, Alzi can contribute to the development of new therapies, diagnostic tools, and potentially even preventive measures. Ultimately, this benefits the entire Alzheimer's community.

Financials

Alzi is on a trajectory for significant growth, starting with a total revenue of \$351,379 in FY1 with annual **gross profit margin of 33%**, projected to escalate dramatically to \$183.6 million by FY5. This surge in revenue is primarily driven by our tiered subscription model, which is effectively capturing a growing share of the market within the Alzheimer's care community. We anticipate a strong turnaround in profitability, with EBITDA expected to rise to \$100.7 million by FY5, showcasing effective cost management and successful operational scaling.

A critical element of our growth strategy is the expansion of our user base. We expect to grow significantly over the next five years, including substantial growth across all service tiers—from basic to premium—indicative of our ability to attract and upgrade users within our platform.

Over the first five years, Alzi anticipates significant revenue expansion driven by strong customer acquisition and market penetration strategies. As revenue scales, Alzi's gross profit margin is expected to improve steadily, reflecting operational efficiencies and cost management. The company projects a rapid transition from initial modest revenue to substantial profitability, with EBITDA margins forecasted to strengthen. Overall, Alzi is positioned for impressive financial performance, with a clear path to sustainable growth and long-term success.



Startup Year					
	1	2	3	4	5
	2024	2025	2026	2027	2028
Income Statement					
Revenue	\$ 351,379	\$ 4,581,728	\$ 73,629,726	\$ 101,361,621	\$ 183,637,502
Subscription	\$ 351,379	\$ 4,581,728	\$ 73,629,726	\$ 101,361,621	\$ 183,637,502
COGS	\$ 234,052	\$ 1,933,253	\$ 28,237,078	\$ 39,272,074	\$ 66,093,554
Gross Profit	\$ 117,328	\$ 2,648,475	\$ 45,392,648	\$ 62,089,547	\$ 117,543,948
Gross Profit Margin	33%	58%	62%	61%	64%
Variable Operating Expenses					
Advertising	\$ 36,895	\$ 481,081	\$ 7,731,121	\$ 10,642,970	\$ 9,640,969
Other Sales & Marketing Expenses	\$ 15,812	\$ 206,178	\$ 3,313,338	\$ 4,561,273	\$ 4,131,844
Total Variable Costs*	\$ 52,707	\$ 687,259	\$ 11,044,459	\$ 15,204,243	\$ 13,772,813
Fixed Operating Expenses					
Selling, General & Administrative	\$ 240,000	\$ 518,400	\$ 746,496	\$ 1,007,770	\$ 2,176,780
Professional Fees	\$ 10,000	\$ 15,000	\$ 30,000	\$ 45,000	\$ 60,000
Other	\$ 2,980	\$ 5,130	\$ 308,380	\$ 614,130	\$ 802,450
Total	\$ 252,980	\$ 538,530	\$ 1,084,876	\$ 1,666,900	\$ 3,039,230
EBITDA	\$ (188,359)	\$ 1,422,685	\$ 33,263,313	\$ 45,218,404	\$ 100,731,905
EBITDA Margin	-54%	31%	45%	45%	57%
Depreciation	\$ 16,000	\$ 32,000	\$ 48,000	\$ 106,000	\$ 1,340,000
Interest**	\$-	\$-	\$-	\$-	\$-
Earnings Before Tax	\$ (204,359)	\$ 1,390,685	\$ 33,215,313	\$ 45,112,404	\$ 99,391,905
Provisions for Income Taxes***	-	-	\$ 6,975,216	\$ 9,473,605	\$ 20,872,300
Net Income	\$ (204,359)	\$ 1,390,685	\$ 26,240,097	\$ 35,638,799	\$ 78,519,605

Assumptions:

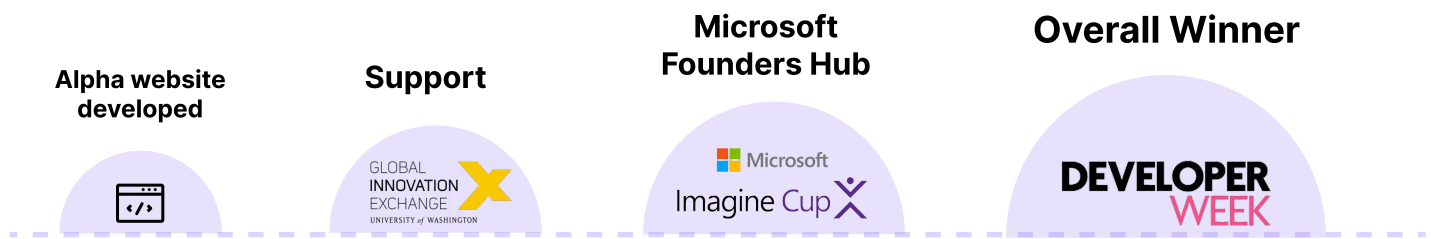
* Advertising and Other Sales & Marketing assumed to be ~15% of revenue in FY1-FY4, and 7.5% in FY5

**Assuming no debt is taken out & fully funded by private investment/equity

*** Taxes may exist despite negative earnings, but would be mostly immaterial

Subscription revenue netted between the basic & premium subscription price multiplied by projected user base each year

Traction



- Alpha website developed in Feb 2024, Alpha watch app developed in April 2024.
- Minimum Viable Product (MVP) qualified in the **Microsoft Imagine Cup**, received Microsoft Founders Hub benefits worth **\$150,000**.
- **Overall Winner of the 2024 DeveloperWeek Competition**, received an award worth **\$12,000**
- Product integration and validation under the guidance of UW Public Health, conducted interviews and field studies with Alzheimer's care providers. Over **70%** of them show enthusiastic interest in Alzi.
- Our prelaunch waitlist has hit **30+ signups**, showcasing the strong interest and demand for Alzi among caregivers and healthcare professionals.

Team

Lakshita Singh, CEO, leveraging advanced technology and analytics techniques to design and develop dynamic dashboards and comprehensive reports. Holding an Engineering degree in Mathematics and Computing, she is also the first author of the paper "Synergizing Reinforcement Learning for Cognitive Medical Decision-Making," published in Springer and a former Harvard WeCode scholar. Currently enrolled in a Master's program in Technology Innovation, UW, she continues to expand her expertise in data-driven innovation and strategic technology implementation.

Sam Cole, CTO, brings a wealth of startup experience, he co-founded TensorMaker, a no-code ML platform, where he served as CTO and was a finalist in the Cal Poly Innovation Quest Startup competition. Additionally, he has undertaken Software Engineering internships and has experience developing new innovative product solutions. He holds a BS in Computer Engineering from California Polytechnic University, currently pursuing Masters in Technology Innovation, UW.

Kendra(Kejuan) Yang, AI Scientist, with a working experience in innovating technology for AI-integrated products, including Large Language Models and Computer Vision. She is a dual-degree master's student in Data Science at UW and Tsinghua University specializing in Machine Learning. She is the winner of the National Robocup Competition in 3D Visual Recognition. She has been a research assistant in LLM agent applications and has contributed to the open-source AgentBench, which has been accepted by the International Conference on Learning Representations (ICLR) 2024.

Yuetong Lu, Product Lead / Marketing, was a marketing strategist in digital campaigns, including the notable MINISO x Barbie series launch in the US. Her expertise spans strategic budget management, creative direction, and ensuring compliance with intellectual property laws. With a Bachelor of Fine Arts and ongoing Master of Science in Technology Innovation at UW, she combines creative talent with technical proficiency to enhance brand engagement and profitability.

Trevor Bagan, Finance/Accountant Assistance, is currently obtaining his Bachelor of Science in Economics and Accounting from the University of California Santa Barbara. He has real-world experience providing accounting services for multiple student-owned event-planning businesses in Goleta, CA. He also has industry experience as an accounting intern at Ernst & Young and a research assistant intern at the American Enterprise Institute.

Advisors

Christian Primack Metcalfe, Teaching Associate at UW Foster School of Business. As the President and Co-founder of Korvata and the VP of Product and Co-Founder of Versive (acquired by eSentire), he has demonstrated expertise in entrepreneurship both in practice and academia. His knowledge informs our approach to building a sustainable and impactful business model.

John Raiti, Associate Professor in ECE, Technical Programs Advisor (Global Innovation Exchange) in Biosystems. He has worked at Applied Dexterity and has developed human-robot interaction projects involving Applied Dexterity's RAVEN and Cockpit robotic platforms. He aids into addressing various legal, regulatory, and technical aspects related to developing a caregiving companion product.

Shilpa Goyal, Senior Product Manager at Microsoft, with over seven years of experience, her experience in product strategy, development, and management, particularly in the tech industry, equips her with valuable insights that are directly relevant to a technology-driven healthcare solution, which is critical for Alzi.

Weichao Yuwen, Associate Professor in Nursing & Healthcare Leadership, Ph.D. Philosophy, Nursing Science with Statistics Concentration UW, with a background in nursing science and health informatics, her expertise can contribute to understanding the needs and challenges faced by caregivers of individuals with Alzheimer's.

Appendix

User Distribution	Users Growth and Distribution					
		FY1	FY2	FY3	FY4	FY5
	Individual Users (D2C)					
70%	Free Trial Tier	662	6,423	66,586	225,410	243,227
20%	Basic Tier	189	1,835	19,024	64,403	69,493
10%	Premium Tier	95	918	9,512	32,201	34,747
	Enterprise Users (B2B2C)					
70%	Free Trial Tier	994	8,514	75,086	225,410	243,227
20%	Basic Tier	284	2,433	21,453	64,403	69,493
10%	Premium Tier	142	1,216	10,727	32,201	34,747
	Total Users (Actual)	2,366	21,340	202,388	644,029	694,934
	Target User Base	2,366	23,114	219,492	804,258	1,274,000
	Net Paid User Additions	710	6,402	60,716	193,209	208,480
	User Assumption					
	Market	Seattle	WA	West Coast	US(Prevalent Alz)	US
	Total Alzheimers' Patients over 65+ in US	13,000	127,000	1,206,000	4,419,000	7,000,000
	Diagnosed among them	3,380	33,020	313,560	1,148,940	1,820,000
	Early stage diagnosed among them	2,366	23,114	219,492	804,258	1,274,000
	Churn Rate	75%	74%	73%	72%	-%
	User Went Away	1,775	17,104	160,229	579,066	-
	Individual User Ratio	40%	43%	47%	50%	50%
	Enterprise User Ratio	60%	57%	53%	50%	50%
	*The target use base is the diagnosed (26%) early Alzheimers' patients over 65					
	**User distribution: 70% free trial, 20% basic, 10% premium					

Subscription Revenue					
	FY1	FY2	FY3	FY4	FY5
<i>Individual Users (D2C)</i>					
Basic Tier	\$151,045	\$1,464,487	\$15,181,502	\$51,393,501	\$55,455,752
Premium Tier	\$134,010	\$1,299,319	\$13,469,302	\$45,597,242	\$49,201,344
Revenue	\$285,056	\$2,763,807	\$28,650,804	\$96,990,743	\$104,657,097
<i>Enterprise Users (B2B2C)</i>					
Basic Tier	\$55,024	\$488,098	\$4,451,087	\$13,802,826	\$14,893,831
Premium Tier	\$85,432	\$757,836	\$6,910,898	\$21,430,704	\$23,124,632
Revenue	\$140,455	\$1,245,933	\$11,361,985	\$35,233,530	\$38,018,462
Total Subscription Revenue	\$425,511	\$4,009,740	\$40,012,789	\$132,224,273	\$142,675,559
Pricing Policy					
<i>Individual Users</i>					
Unit Price (Basic)	\$19	\$19	\$19	\$19	\$19
Unit Price (Premium)	\$59	\$59	\$59	\$59	\$59
<i>Enterprise Users</i>					
Unit Price (Basic)	\$16	\$17	\$17	\$18	\$18
Unit Price (Premium)	\$50	\$52	\$54	\$55	\$55
Discount: 15% - 1% x n	15%	12%	9%	6%	6%

Cost Structure					
	FY1	FY2	FY3	FY4	FY5
Free Trial Tier Cost		\$7,453	\$87,219	\$637,521	\$2,028,691
Basic Tier Cost		\$35,036	\$315,995	\$2,996,956	\$9,536,779
Premium Tier Cost		\$54,399	\$490,638	\$4,653,297	\$14,807,511
Direct Labor (Software Developers)*		\$120,000	\$604,000	\$1,328,800	\$2,192,520
Total COGS		\$216,888	\$1,477,853	\$9,616,574	\$28,565,501
*Labor wages/salaries directly tied to Alzi Software Development to be sold & marketed to public					

Direct Labor (Software Development)					
	FY1	FY2	FY3	FY4	FY5
Employees	4	10	20	30	40
Average salary	\$30,000	\$60,400	\$66,440	\$73,084	\$80,392
Total	\$120,000	\$604,000	\$1,328,800	\$2,192,520	\$3,215,696

Marketing Expenses					
	FY1	FY2	FY3	FY4	FY5
Advertising	\$44,679	\$421,023	\$4,201,343	\$13,883,549	\$7,490,467
Other Sales & Marketing Expenses	\$19,148	\$180,438	\$1,800,576	\$5,950,092	\$3,210,200
Total Sales & Marketing Expenses	\$63,827	\$601,461	\$6,001,918	\$19,833,641	\$10,700,667

General & Administrative					
	FY1	FY2	FY3	FY4	FY5
Fixed					
Average Salary per employee	\$80,000	\$86,400	\$93,312	\$100,777	\$108,839
Employees (Non Direct)	4	6	15	20	20
Total Salaries/Wages	\$320,000	\$518,400	\$1,399,680	\$2,015,540	\$2,176,780
Legal & Professional Fees	\$10,000	\$15,000	\$30,000	\$45,000	\$60,000
Other General Expenses					
Rent & Utilities	\$ -	\$ -	\$300,000	\$600,000	\$750,000
Office Supplies	\$100	\$250	\$800	\$1,250	\$6,250
Insurance	\$3,780	\$3,780	\$7,212	\$7,212	\$7,212
Travel Expenses	\$ -	\$2,000	\$5,000	\$10,000	\$40,000
Total Other	\$3,880	\$6,030	\$13,012	\$618,462	\$803,462
Total General & Administrative	\$333,880	\$539,430	\$1,742,692	\$2,679,002	\$3,040,242

Product Cost Breakdown									
Annual Cost	Product cost								
\$4.50 Free Trial Tier Users*		1,656	14,938	141,671	450,820				486,454
\$74 Basic Tier User		473	4,268	40,478	128,806				138,987
\$230 Premium Tier User		237	2,134	20,239	64,403				69,493
Total Users		2,366	21,340	202,388	644,029				694,934
Free Trial Tier Users		\$7,453	\$67,219	\$637,521	\$2,028,691				\$2,189,043
Basic Tier User		\$35,036	\$315,995	\$2,996,956	\$9,536,779				\$10,290,586
Premium Tier User		\$54,399	\$490,638	\$4,653,297	\$14,807,511				\$15,977,928
Total Product Cost		\$96,888	\$873,853	\$8,287,774	\$26,372,981				\$28,457,557
*One-time purchase									

Advertising approximated to be ~15% of sales revenue first 4 years, and then ~7.5% starting year 4
 Other Sales & Marketing 30% of Advertising

Insurance Expenses				
	Monthly Expense	FY1 - FY2	FY3 - FY5	
Technology errors and omissions insurance	91	91	91	
Cyber insurance	153	153	153	
Fidelity bonds	88		88	
General liability insurance	31	31	31	
Workers' compensation	40	40	40	
Commercial auto insurance	198		198	
Monthly Total		315	601	
Annual Total		3780	7212	

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