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碩士論文

Global MBA

College of Management

National Taiwan University

Master's Thesis

XR 應用程式開發公司– 專為各產業員工培訓、遊戲化數位學習

TalentForge XR Custom XR App Development for Employee Training and Immersive Learning

賴灝允

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Acknowledgments

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To my beloved wife, Rosa, for your understanding, kindness, patience, and unwavering faith in me. A special thanks to my best friend and brother, Stefan, for always being there to inspire and motivate me. Our brotherhood has elevated my life in countless ways, and I am deeply grateful for your presence.

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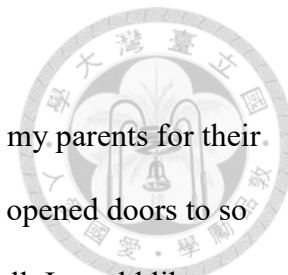
Executive Summary

Company Vision

To revolutionize sales training in the tech industry through immersive learning

Company Mission

TalentForge XR is committed to transforming sales training programs in the tech industry with AR/VR one client at a time.

Management

TalentForge XR, founded in 2024, operates as a Limited Liability Company (LLC) owned by Stephen Lai, who has 5 years of experience in IT Sales in companies of varying sizes such as the unicorn startup Nutanix, FONTUNE 1000 company Citrix, mid-size company Syncfusion and 3 years of experience in computer engineering. Stephen will oversee the initial hiring, bringing in new clients, networking with partners, and raising capital. TalentForge XR will have a lean structure with a UI/UX developer and backend developer focused on developing a minimum-viable product. Developers will be sourced from Taipei, Taiwan. For design work, TalentForge XR will contract out projects to freelancers and content development firms to figure out the best fit. A designer will be contract-to-hire for the first 6 months and will need to collaborate with developers, interact with clients.
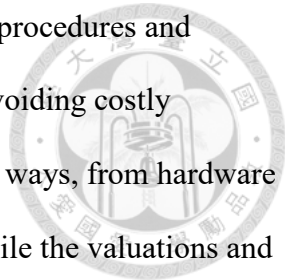
Products & Services

We offer a Gap analysis where our team will travel on-site and identify inefficiencies or pain points in the company's current sales training process and paint a picture of what it could be by mapping out a potential action plan. From there, clients can choose between our two licenses for corporate XR Employee Training. Our Essential License averages $12,500 annually, ranging from $5,000-$20,000 based on company size/revenue. It Provides customizable interactive 3D

questionnaires with mini-games, which help streamline sales onboarding. The Premium License, averagely costing $35,000 annually, ranging from $20,000-$50,000, offers Custom VR Modules, enabling employees to practice functional tasks and scenarios relevant to their roles, ensuring practical training outcomes and uniformity across all locations. As part of our commitment to providing a seamless experience, we provide 5 Meta Quest 2 headsets based on their headcount/company size. These headsets come pre-installed with our application and are side-loaded for immediate use upon delivery. We also provide support and consulting services to help with adoption and ROI of our product. Both licenses will include analytics and reporting features to track employee progress and engagement levels. Clients can receive training data analytics such as the number of attempts, completion rate, and time spent. We also offer XR consulting for any projects companies may have related to the XR space on an hourly or retainer basis. Later on our solution can also be utilized during the interview process, for competency tests, and industry certification practice.

Market

The 21st century has witnessed substantial progress in AR and VR development, especially in the past 5 years, arising from advancements in computing power, display technology, and motion tracking. (Cipresso, 2018). From the Oculus VR and Magic Leap in 2016, to HTC Vive and PlayStation VR, and now Meta Quest 3 and Apple Vision Pro, AR and VR are becoming more and more adopted by millions of users worldwide. (Druzhinin, 2019; Vieyra, 2019) Beyond entertainment, AR and VR have found applications in diverse sectors such as retail, real estate, healthcare, education, manufacturing, emergency services, and military. (Dhamecha, 2021; GfG, 2024) By leveraging AR and VR technologies, organizations can streamline training processes, reducing resource allocation, and minimizing the need for direct supervision. (Peek, 2024)
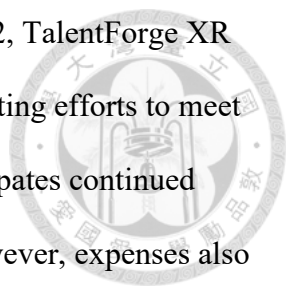
Employees can immerse themselves in simulated environments, practicing procedures and scenarios without real-world consequences, thereby mitigating risks, and avoiding costly mistakes. (Learning, 2023) The AR/VR market can be categorized in many ways, from hardware to software, enterprise to consumer, by industry, geographical location. While the valuations and projections may slightly differ, both estimate the market value to be in the tens of billions and are optimistic in the continued growth of the market. (Alsop, 2023) According to MarketsandMarkets, the AR and VR software market is projected to be USD $32.5 billion in 2023, and USD $77.5 billion by 2028 at a CAGR of 19%. (MarketsandMarkets, 2023) Similarly, P&S Intelligence reports a market size of USD $28.5 billion in 2021, forecasting it to reach $200.1 billion USD by 2030, with a CAGR of 24.2%. (P&S, 2022).

TalentForge XR's SWOT analysis highlights several key factors shaping its strategic position in the market. Strengths include its expertise in XR technology, niche market focuses on customizable XR applications, and a lean and agile team facilitating efficient operations. Opportunities include the growing demand for XR solutions across industries, potential strategic partnerships, and the emergence of new technologies. However, threats include large competitors, rapid technological advancements, and economic downturns that could impact client budgets and demand.

Financial Projections

TalentForge XR anticipates a trajectory of consistent growth and strategic adaptation. In Year 1, the company aims to prioritize the development of a minimum viable product and establish its presence in the local Triangle Area. The projected total revenue for Year 1 is $321,200, aiming for 2 new clients a quarter in the first year, along with consulting and other streams of revenue. After the operating costs for developers and investing in marketing efforts

and networking events, we expect a net loss of -$1,174. Moving into Year 2, TalentForge XR plans to bring on full time employees while increase advertising and marketing efforts to meet demand, with an expected loss of -$171,145. In Year 3, the company anticipates continued growth to 16 total clients after churn, targeting a revenue of $749,308. However, expenses also increase to $850,235 as we bring on a Team Lead resulting in a loss of -$100,927. Looking ahead, we expect to achieve profitability Year 4 with a net income of $85,562 as license renewals increase and expenses stabilize. We hope to onboard a new client for each license every other month, for a total of 6 new Essential and 6 new Premium, as well as aspire for 1 larger client. By Year 5 we anticipate a total of 29 clients after churn, and a net profit of $204,461 meaning that we reach breakeven.

Conclusion

In conclusion, TalentForge XR intends to venture into a rapidly evolving AR/VR market brimming with exciting possibilities. As we witness the growing adoption of immersive technologies across industries, we are optimistic about the immense potential for our tailored XR training solutions to revolutionize learning and skill development. However, amidst this optimism, we acknowledge the inherent uncertainties and risks that accompany our journey. The upfront investment in staff, VR hardware, the potential for extended sales cycles, and competitive market dynamics. Looking ahead, our future plans include strategic scaling of our development and sales teams, expanding our market reach beyond the Triangle Area, and potentially exploring strategic partnerships and raising capital to further accelerate growth. While the road ahead may be marked by uncertainties, we are confident if we can retain clients, over time we will solidify TalentForge XR's position as a strong player in AR/VR training solutions.

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<p style="text-align:center;">**Business Overview**</p>

Business Name

TalentForge XR

Legal Structure

TalentForge XR operates as a Limited Liability Company (LLC)

Business Formation History

Founded by Stephen Lai in 2024, TalentForge XR emerged as a response to noticing a gap between large corporate sales training versus startups and medium-size companies, as well as the growing demand for innovative XR (Extended Reality) app development solutions and

Type of Business

TalentForge XR specializes in XR app development, offering customized solutions to clients across diverse industry verticals with a primary focus in IT Sales training. With a team of skilled developers, designers, and other professionals, the company is committed to delivering high-quality XR applications that elevate employee training, educational content, and soft skills practice.

Location

TalentForge XR operates as a remote company, with its team working from various locations. TalentForge XR's founder, Stephen Lai, is based in the Triangle area of North Carolina, bringing his expertise and leadership to the heart of a vibrant technological hub. North Carolina is a strategic location on the East Coast, with easy expansion plans to other markets in Atlanta and Wasington D.C. North Carolina is also known for its Research Triangle Park (RTP), which has numerous businesses and universities fostering innovation and collaboration. North

Carolina also has a business friendly environment, with low corporate taxes and regulations, as well as incentives. It is more cost-effective than urban areas in California or New York.

Means of Doing Business

TalentForge XR conducts its operations primarily through the Internet, leveraging online platforms and collaboration tools such as Slack, Google Meet, Trello, Pipedrive, GitHub, to work with clients, manage projects, and deliver services.

Mission Statement

TalentForge XR is committed to transforming sales training programs with AR/VR one client at a time.

Description

With Stephen Lai's years of IT Sales experience, he has learned how large corporations train that make them a cut above medium and small companies. Details from being sent to voicemail versus asking to book a meeting, from having sales representatives follow a script template, having junior representatives start calling with no guidance versus having junior representatives listen in on senior representatives, from having a folder with marketing content to use, to asking for a followup meeting versus how to ask for the business and close the deal. There is more to sales than just reading a script and giving out discounts. The key to technical sales is asking the right questions, which comes from having knowledge about the industry as well as the product/service. Talentforge XR will create a IT Sales Training minimum viable product, which will elevate sales in SMB by helping sales representatives learn about their quota expectations, commission structure, the tools they will be using, the product/service they are selling, listen to recordings of previous successful calls and demos from senior representatives, simulates common objections they run in to, how to handle other situations. Our product will

help increase sales efficiency, and thus increase revenue. Our team leverages cutting-edge technologies such as Unity3D and Unreal Engine, ARCore, Vuforia, and 3D modeling software such as Blender, 3ds Max, and Maya.
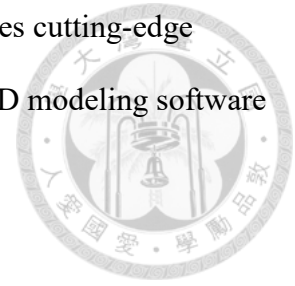
Market Research

Background

The concept of AR and VR has been around for decades; however, the practical realization of VR has been delayed by challenges including hardware constraints, software compatibility issues, and cost of development, all acting as barriers to its adoption into everyday life. (Cipresso, 2018)

It's not until the 21st century that AR and VR have made significant progress, arising from advancements in computing power, display technology, and motion tracking. (Cipresso, 2018) In 2012, Oculus VR was founded, with Oculus Rift headset being the first consumer-oriented VR released in 2016. (Druzhinin, 2019) Around the same time, companies like Magic Leap and Microsoft began developing AR headsets, with the aim to blend digital content with reality. With the launch of ARKit by Apple and ARCore by Google enabling developers to create AR, smartphones and tablets also saw a surge in AR applications for mobile devices. (Vieyra, 2019) An example of how fast AR impacted how people interact is Pokémon GO, which had over 200 million monthly active users worldwide in 2016, generating over $6 billion overall, making it one of the most successful mobile games of all time. (Iqbal, 2024) VR gained traction in gaming and entertainment as well, with the release of VR headsets such as the HTC Vive, PlayStation VR, and Samsung Gear VR. In recent years, AR and VR have expanded

beyond gaming and entertainment into all areas such as manufacturing, healthcare, education, retail, and enterprise. (Cipresso, 2018)

In 2021, the tech giant Facebook even rebranded its name to Meta and has spent billions to bring their vision to fruition and capture the majority of the market share. (Dean, 2022) However, Meta is not directly profitable in terms of hardware sales, with Meta losing money on each unit sold due to low price points and high manufacturing costs. (Sobociński, 2023) In 2024, the introduction of the Apple Vision Pro marked a significant advancement in the pursuit of immersive experiences, priced at $3500. The Apple Vision Pro garnered considerable attention with an impressive 200,000 pre-orders. (Nolan, 2024) Nonetheless, there have been reviews that reflect the product is still lacking features such as shared experiences and there are issues with tracking a screen while moving. (Brownlee, 2024) During CES 2024, a multitude of companies showcased their AR/VR products, indicating a substantial influx of capital into the market. (Hector, 2024) Beyond the realm of consumer electronics, the impact of AR and VR extends across diverse sectors, from retail to architecture, manufacturing to healthcare, and education to military applications. (Dhamecha, 2021; GfG, 2024) In retail, companies can provide showrooms for products such as test driving a car, seeing how furniture fits in a room, or seeing how clothes will look. (Dhamecha, 2021) For architecture or real estate, companies can model buildings or tour properties. (Dhamecha, 2021) In manufacturing, AR and VR technologies revolutionize design processes, enhance training simulations, and streamline production workflows. (Peek, 2024) In healthcare, AR facilitates surgical precision and medical training, while VR offers therapeutic interventions and patient education initiatives, and so on and so forth. (GfG, 2024) Employees can immerse themselves in simulated environment such as

identifying hazards, LOTO Procedures, Forklift safety, navigating confined spaces, or situations like a robbery or active shooter. (Learning, 2023)

Traditional methods of learning have evolved as courses are increasingly digitized, allowing millions of users to access a plethora of educational resources online. (Kunmar, 2023) The rise of e-learning apps like Coursera, Skillshare, edX, Udemy, MasterClass, Khan Academy, have further expanded opportunities for knowledge acquisition and skill enhancement online. (Burton, 2024) Moreover, the landscape of education and skill development has witnessed a profound transformation in recent years, with platforms using machine learning to curate content for learners. (Koksal, 2022) Immersive learning emerges as the next frontier. By integrating augmented reality (AR) and virtual reality (VR) technologies into the learning process, learning can be transformed thru gamification, customization, and simulation. (Digital, 2022)

As the demand for immersive learning solutions continues to grow, TalentForge XR is poised to capitalize on this emerging trend, offering customizable XR applications designed to elevate employee training, enhance educational content, and facilitate the acquisition of essential skills. With our expertise in XR app development and commitment to innovation, we are well-positioned to meet the evolving needs of learners and organizations alike in this dynamic digital landscape.

Market Size

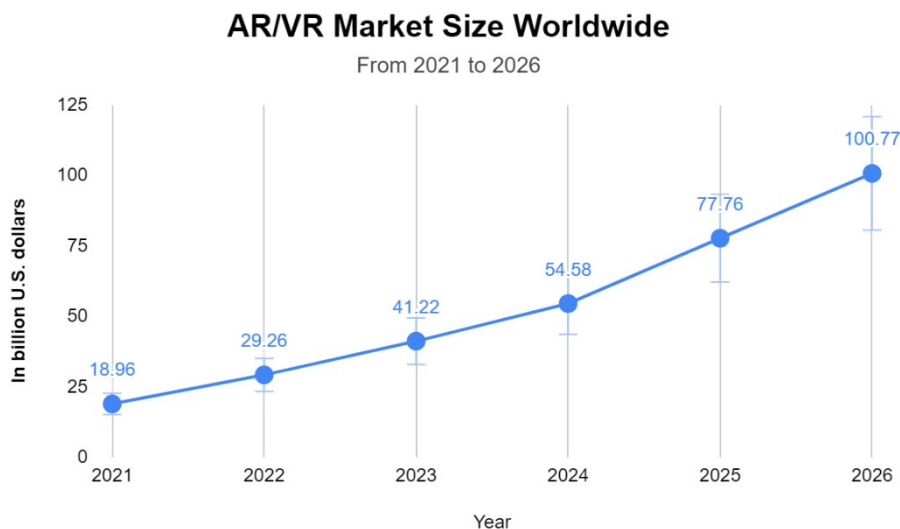The AR/VR market can be categorized in many ways, from hardware to software, enterprise to consumer, by industry, geographical location. While the valuations and projections may slightly differ, both estimate the market value to be in the tens of billions and are optimistic in the continued growth of the market. As we can see in figure 1, overall, the AR/VR market is growing and projected to continue growth worldwide.

Figure 1

AR/VR Market Size Worldwide

AR/VR Market Size Worldwide
From 2021 to 2026

Adapted From: Alsop, T. (2023, March 9). *XR market size worldwide 2021-2026*. Statista.

https://www.statista.com/statistics/591181/global-augmented-virtual-reality-market-size/

The global AR and VR headsets market, valued at USD 6.78 billion in 2022, is forecasted

to reach around USD 142.5 billion by 2032, growing at a CAGR of 35.6% from 2023 to 2032,

with North America expected to lead in market share. (Precedence Research, 2023a) Our focus is

on the AR/VR software market for enterprises in the United States. Various sources project

differing valuations of the AR and VR market software. According to MarketsandMarkets, the

AR and VR software market is projected to be USD $32.5 billion in 2023, and USD $77.5 billion

by 2028 at a CAGR of 19%. (MarketsandMarkets, 2023) In 2024, AR Software emerges as the

leading segment, boasting a market volume of US$4.0 billion. The United States is anticipated to

be the top revenue generator in the AR & VR market, with a projected market volume of

US$10.3 billion in the same year. (Statista, 2023) According to more conservative forecasts, the

VR software market in the United States is poised to reach a revenue of US$990.3 million by

2024, and is projected to maintain a compound annual growth rate (CAGR) of 5.57%. (Statista, 2022)

If we break it down by industry, the global market size for virtual sports reached USD 16.38 billion in 2023 and is expected to reach approximately USD 77.07 billion by 2033, growing at a compound annual growth rate (CAGR) of 16.75%. (Precedence Research, 2024) The Global AR and VR in Education Market is anticipated to grow from USD 11.9 billion in 2023, with a projected compound annual growth rate (CAGR) of 20.26%, to achieve a value of approximately USD 75 billion by 2033. (Market.us, 2024) The global AR and VR in manufacturing market was valued at USD 8.2 billion in 2022 and is projected to reach USD 74.1 billion by 2032, with a CAGR of 24.62% from 2023 to 2032. (Precedence Research, 2023b) The global market size for virtual reality in retail was valued at USD 3.1 billion in 2022. (Research, 2019) It is expected to reach USD 24.4 billion by 2031, with a projected compound annual growth rate (CAGR) of 25.8%. (Research, 2019) Revenue from healthcare AR VR is estimated to be USD $2.80 billion in 2024, and is forecasted to grow at a CAGR of 18.2% through 2034. (Fact.mr, 2024) Valuation for Sales Training Software market is USD 2.1 billion in 2022, and anticipated to grow to 6 billion by 2030. (SNS Insider, 2024) Since we are targeting the business-to-business market, it would be advantageous for us to focus on the top sectors. However, we need to also consider that regulated industries may be more difficult to enter.

Figure 2

AR/VR in Various Industries

AR/VR in Various Industries

From 2023-2024
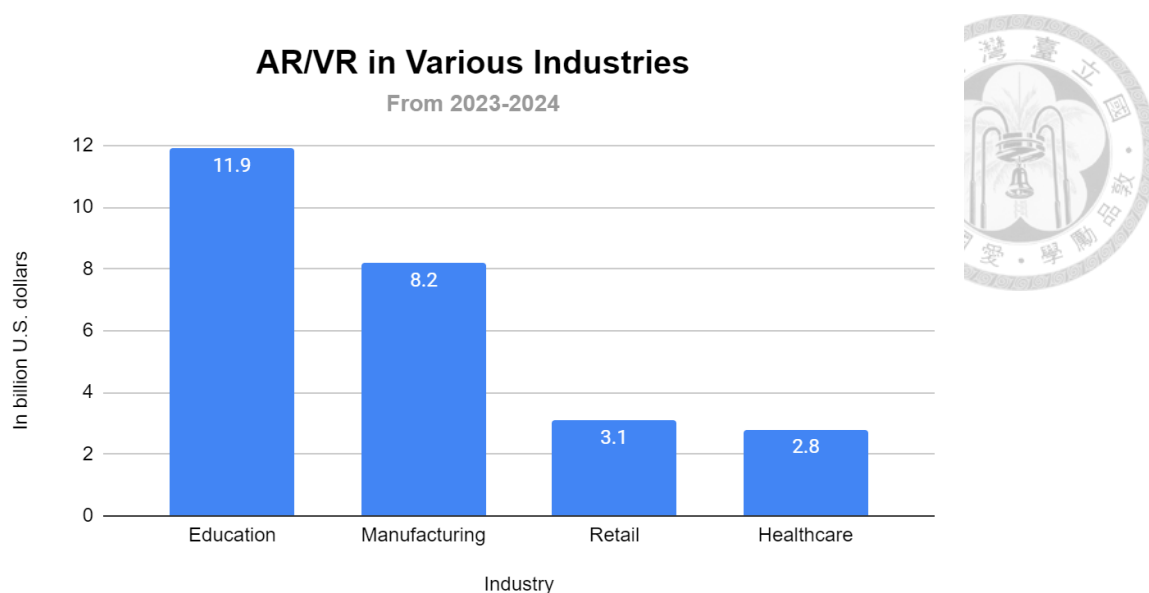
Since we are targeting employee training, it is crucial we look at corporate training market size, as well as Learning Management Systems (LMS) which institutions use to create, manage, deliver, and report on training courses. According to Skyquest, the global corporate training market size in 2021 was valued at USD 151.75 billion, and 163.58 billion in 2022 with a predicted 8% CAGR. (Skyquest, 2022) This is reasonable, as all companies, no matter industry, need training to improve productivity, motivation, performance, and retention, whether it is soft skills, technical skills, quality or compliance. (Skyquest, 2022) Now, looking at Learning Management System market size, Marketsandmarkets evaluates the value to be at USD 22.1 billion in 2023, with an CAGR or 18.6%. (Marketsandmarkets, 2023)

The current consumer landscape is marked by a relative scarcity of AR and VR applications, with an estimated 1000 - 1500 apps in the Meta Quest App Store (Meta Platforms, 2018), and 600 apps specifically designed for the Vision Pro. (Apple Newsroom, 2024) (Buildfire, 2024) We can consider allocating some of our R&D to launch a consumer facing e-learning application down the line after our development process is streamlined.

SWOT Analysis

Strengths:

1. Expertise in XR technology: The company possesses specialized skills and knowledge in XR app development, allowing us to deliver high-quality, immersive solutions tailored to client needs.

2. Niche Market Focus: The company targets mid-size companies with 50-200 million in revenue, located in the North Carolina triangle area. Initially focus on sectors such as healthcare, manufacturing, real estate, retail and will narrow down as gain more traction.

3. Lean and agile team: Being a small and lean team enables the company to be nimble, responsive, and cost-effective in its operations, fostering efficient decision-making and streamlined communication.

Weaknesses:

1. Limited resources: As a small company, resource constraints such as funding, staffing, and technological infrastructure may limit the company's capacity to handle large-scale projects, and means less room for error on where we allocate our capital.

2. Geographical limitation: while targeting the North Carolina triangle area is a niche, it also potentially limits us from a more lucrative geographical area.

3. Potential skill gaps: With a small team, there may be limitations in expertise or skill sets, which we may have to outsource in order to tackle complex projects or meet evolving client demands effectively.

Opportunities:
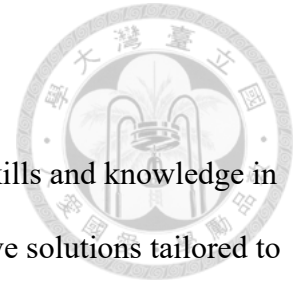
1. Growing demand: With the increasing adoption of XR technologies across various industries, there is a significant opportunity for TalentForge XR to capitalize on the expanding market and attract new clients seeking innovative e-learning solutions.

2. Partnerships: by collaborating with hardware manufacturers, industry specific associations, integrators, technology partners, incubators, resellers and distributors we can gain an advantage.

3. Emerging technologies: The evolution of new technologies such as augmented reality (AR), virtual reality (VR), and mixed reality (MR) presents opportunities for TalentForge XR to develop cutting-edge applications and stay ahead of competitors.

Threats:

1. Intense competition: The XR app development market is highly competitive, with numerous players vying for market share. TalentForge XR faces the risk of losing market share if a large player directly competes.

2. Rapid technological advancements: The rapid pace of technological innovation poses a threat to TalentForge XR, as new developments could quickly render existing solutions obsolete or require significant investment to stay relevant.

3. Economic downturns: Economic downturns or global crises could impact client budgets and reduce demand for XR app development services, potentially leading to decreased revenue and profitability for TalentForge XR.

<center>**Operations**</center>

Executive

Like many startups, the executive must wear multiple hats. The executive will oversee staffing, managing projects, meeting clients, performing demos, attending trade shows,

networking with strategic partners, and seeking investment from investors. As the company scales, the executive will bring in a team lead to manage the projects and promote employees with tenure into management positions.

Development Team

The core team will consist of 1 UI Engineer with an estimated $60K salary, and 2 Backend Engineers each earning around $80K in salary to develop the initial minimum viable product. Developers will be sourced from Taipei, Taiwan for high quality output and to reduce salary expenses. As the customer base scales up, the system will need to be optimized into a more robust distributed system. At this scale, the backend engineering team will expand to 3-5 engineers. If more advanced UI capabilities are required, the UI team will grow to 2-3 engineers. Additionally, depending on the amount of data, a Data Pipeline Engineer earning $100K will be brought on to build out data pipelines and processing workflows. To lead and organize this growing cross-functional team, a Team Lead role with an approximate $120K salary may be necessary as well. Consideration will be given to outsourcing global hires for specialized skills or to scale up development capacity as needed. Developers will have the flexibility to work remotely, leveraging digital collaboration tools and communication channels for seamless coordination.

R&D

Our R&D efforts focus on further advancing its data analytics, incorporating machine learning and AI, as well as potentially launching a consumer-facing e-learning app into the Meta App Store. These R&D initiatives give us a competitive advantage, improving our positioning in the market, and opens new streams of revenue.

Design Team & Marketing

The design team is just as critical, if not more critical, for client projects. As such, hiring a designer who is the most qualified and best fit for the role is paramount. That is why the first year we will seek freelancers and collaborate with designers from content development studios to scout for the best fit. We will pay $2,500 on a per project basis, depending on the requirements of the client. The designer we hire will be evaluated as contract-to-hire with an initial 70K salary with the opportunity to be promoted and raised to a 90K salary based on performance. As our clientele list grows, a junior designer will be brought on to assist the designer. The designer must be well versed in 3D design, and consistent with branding and marketing. The designer will be responsible for collaborating with clients and developers, and occasionally marketing material for marketing campaigns. A Marketing representative will be brought in to manage email campaigns, advertisements, promotions, and online presence. They will also help prepare for any activities pertaining to events and tradeshows.

Legal & Compliance

TalentForge XR will engage a lawyer to draft employee contracts, client agreements, and other necessary legal documents to protect the company's interests and ensure compliance with relevant regulations. Additionally, the Legal and Compliance team educates employees on legal and regulatory requirements, develops policies and procedures to ensure adherence to industry standards, and provides guidance on ethical business practices. In the event of legal disputes or regulatory inquiries, this department represents the company's interests and liaises with external legal counsel as needed. Overall, the Legal and Compliance department plays a crucial role in mitigating legal risks and fostering a culture of compliance within the startup.

Finance and Accounting

Starting out, the executive will be responsible for the finances, and will contract out accounting to a trusted CPA on a $5000 retainer basis. The Finance and Accounting in a startup is fundamental to its financial health and sustainability. This department is responsible for managing the company's financial activities, including accounting, and financial reporting. They track the startup's revenues, expenses, and cash flow to ensure efficient allocation of resources and adherence to financial goals. The Finance and Accounting also handles payroll processing, tax compliance, and financial audits to maintain regulatory compliance and ensure accuracy in financial reporting.

Products and Services

We provide end-to-end full-service from the gap analysis, essential/premium license, consulting services to support. Our offerings include:

Table 1

TalentForge XR Product and Services

Gap Analysis	Essential License (Company Size/Revenue based)	Premium License (Company Size/Revenue based)	Support and Consultancy Services
$2,000 flight fare included	$5,000 - $20,000 per project $12,500 average annually	$20,000 - $50,000 per project $35,000 average annually	$120 / hour $5,000 on retainer
Travel On-site with designer/engineer map out action plan deliverable report	Interactive 3D Questionnaire with Mini-games Data-driven 5 Loaded Headsets	Custom VR Modules Data-driven 5 Loaded Headsets	Integration, onboarding, adoption, maintenance, and best practices

Gap analysis

Our team travels on-site to conduct an evaluation of the client's inefficiencies and pain points in the current training process. We identify goals and objectives that add business value and map out an action plan of how they can be achieved with our solution. We provide an all-intensive report with predictive benefits.

Corporate XR Employee Training

Essential License

Our base format is customizable interactive 3D questionnaires with mini-games inspired by platforms like Brilliant.org, except in 3D, catered to providing engaging and useful learning experiences for employees. We elevate the onboarding experience for client employees by presenting essential content, such as the employee handbook and knowledge about products and services, in an engaging and stimulating manner. Our platform can also be utilized during the interview process, for competency tests, and industry certification practice.

Premium License

Our VR modules enable employees to practice functional tasks and scenarios relevant to their roles. These modules are created based on real-world use cases, like the successful approach adopted by Strivr for Walmart, ensuring practical and effective training outcomes. The benefits are that training is uniform across all locations and does not require time and resources training thus reducing training costs. Also, there is increased engagement from employees. In certain industries, VR training provides safety and saves resources and even lives.

Analytic Data Add-on

We offer advanced analytics and reporting features within the app to track employee progress, engagement levels, and performance metrics during training sessions. Provide

actionable insights and recommendations based on training data to help businesses optimize their training programs and improve learning outcomes.

Support & Consultancy Services

Our support services guide the client on adopting XR technology into their employee training programs. We train the trainer integration strategies, provide expertise on best practices for equipment maintenance, and answer any other relevant requests. Our consulting is for other related services we provide that are not covered in the scope of our licenses.

Client Onboarding

Our onboarding process is designed to ensure a seamless and successful integration of our solutions into the client's organization. It begins with adding the client to our Slack and providing a form to fill out with questions about their business objectives. From there, we do a curriculum mapping, meticulously detailing the immersive environment, learning pathways, activities, and learning principles. Our content design phase follows, where our designers review existing content files and transform them into engaging digital assets with interactive elements. Next step is the Experience Development stage where the engineers code interactions, storylines, and incorporate performance analytics for continuous improvement. Rigorous module testing ensures quality before we load the headsets with the VR app. We then train the trainer, making sure the client's personnel in charge of training has the knowledge to conduct VR demos, maintain headsets, and implement the new program effectively. Finally, we oversee the rollout program, delivering the headsets, and providing ongoing support to ensure successful adoption.

Sales & Marketing

TalentForge XR recognizes the importance of a targeted approach to sales and marketing to effectively reach our ideal customers and drive the adoption of our XR training solutions.

Initially, we will hire 2 sales representatives each with an estimated 60K salary + commission. The commission structure will be 5% of the license sale and received a month after the invoice is paid in full. Sales representatives will also receive rewards such as $10, 25 gift cards for demos performed. Representatives will be required to make 60+ calls a day, book and perform 5 demos a week, as well as attend networking events and tradeshows. Sales representatives who fail to meet their demo quota for a consecutive month are terminated. Likewise, sales representatives without a closed deal in 6 months are terminated.

Table 2

Sales KPIs

	Day	Week	Month	Quarter	Year	Rep x 2
Calls	60	300	1,200	3,600	14,400	28800
Demos	1	3	12	36	144	288
Gap analysis	0	0	2	6	24	48
License	0	0	0	1	4	8

Cold Calling and Tradeshows

We will implement a comprehensive sales and marketing approach to drive business growth for our XR training solutions. This includes executing a proactive cold calling campaign to directly engage decision-makers and stakeholders at target companies locally and nationwide. Additionally, we will establish a strategic presence at key industry events focused on AR/VR technology, HR & employee training, and other relevant trade shows. These trade shows, conferences, and expos provide booths to showcase our solutions, network with potential clients, and generate leads.

Marketing Campaign Promotions

We will identify a select 3 potential test users representing our target verticals and ideal customer profile. To encourage widespread adoption, we will offer the test users free licenses to access the full functionality of our AR/VR app for a specified period. During this trial, we will actively engage with them to gather comprehensive feedback on their experience through surveys, interviews, and direct communication channels. This will provide valuable insights into user satisfaction, usability, and functionality. By offering free licenses and actively soliciting feedback, we aim to lower the barrier to entry and generate compelling case studies and promotional content that we can use to persuade companies in the same industry. This approach will not only help streamline the client onboarding process and drive product improvement but also increase our marketing ammunition.

Creating Marketing Content

To effectively showcase the benefits and features of our AR/VR app, we will create a diverse array of promotional content. This comprehensive marketing approach will include the production of high-quality videos that highlight the key features and use cases of our app. These videos will be strategically utilized on our Youtube channel, website, LinkedIn, social media, and email campaigns to attract and engage potential clients.

Additionally, we will conduct interviews with test users, gathering their testimonials and insights on how our app has helped them solve problems or achieve their goals. We can also interview known experts in the field, Q&A at tradeshows, and record at other events. These recorded interviews will serve as powerful promotional content, building credibility and trust with prospective clients by showcasing our journey, brand, and success stories. Our content strategy will also encompass the creation of concise yet informative 1-2 page whitepapers

covering relevant industry topics. These whitepapers will not only showcase our expertise but also provide valuable solutions to common challenges faced by our target audience. Furthermore, we will develop a visually appealing and comprehensive slide deck to effectively communicate our value proposition, offerings, advantages, and achievements during presentations and investor pitch meetings. This will include "About Us" materials that highlight our company's history, mission, values, expertise, and commitment.

Investor Relations & Strategic Partnerships

TalentForge XR will actively seek strategic partnerships with industry associations, certification bodies, educational institutions, and technology providers to enhance its capabilities, expand its market reach, and unlock new business opportunities. If possible, partner with VR headset manufacturers like Meta that may be able to provide standalone headsets in bulk. Engaging with industry-specific associations in manufacturing, healthcare, retail, education, and technology sectors to meet industry regulations. Partnering with integrators such as LMS and HR providers will facilitate seamless integrations into existing systems. Partner with tech providers such as GCP/Azure, Unity3D, and Blender. Working with freelancers, development firms, and incubators augments our talent pool and innovation capacity. Consider working with resellers and distributors to increase market penetration. Ideally, we can partner with industry associations, certification bodies, educational institutions or e-learning providers like Coursera, Udemy, and Skillshare to offer accredited training programs and certifications. These strategic alliances broaden our content and relevance and would fortify our position as a leading AR VR employee training solution.

Competitor Analysis
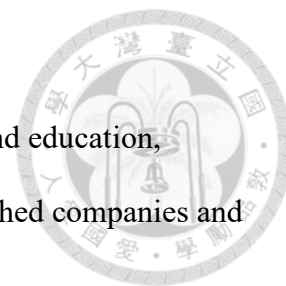
In the rapidly evolving landscape of XR applications for training and education, TalentForge XR faces competition from various players, including established companies and innovative startups.

Table 3

Company	Description	Founded Year	HQ location	Last Raised	Total Raised
Strivr	STRIVR revolutionizes employee training and development through virtual reality, simulating real-world scenarios for enhanced learning and growth.	2015	Santa Clara, CA	35M	93M
Talespin (Cornerstone OnDemand)	CSOD has acquired Talespin, a top provider of "extended reality" and "spatial learning" software, and its skilled team. This move aims to enhance CSOD's workforce skills development efforts, strengthening its content subscriptions, curation, creation, and insights technology.	2015	Culver City, CA	Acquired	40M
SynergyXR	SynergyXR is a no-code, cloud platform that lets companies train, onboard, sell, and support across all XR devices without writing any code.	2018	Sunnydale, CA	2M	5M
Motive.io	The VR training platform enables seamless creation, deployment, tracking, and maintenance of immersive training applications for enterprises, offering tools for job-skills training, soft-skills scenarios, and open-world simulations.	2013	Burnaby, BC Canada	150M	639M
Interplay Learning	Interplay Learning Player is an online, on-demand learning experience platform delivering a growing catalog of courses for the skilled trades industry.	2010	Austin, TX	N/A	27M

Top 5 Direct competitors

Strivr Walmart Use-case

Strivr has partnered with major corporations like Walmart to provide immersive customer service training solutions. Immersive Learning has revolutionized training practices at Walmart's 200 Academies across the United States. Traditionally, associates had to drive to training facilities for sessions lasting up to six weeks. With the implementation of Immersive Learning, training has become standardized and condensed, reducing session durations to just 15 minutes. (Strivr, 2024) This approach encompasses both technical skills, such as handling produce at the "wet wall" and utilizing pickup towers, as well as soft skills vital for effective customer service and teamwork. VR simulations present realistic scenarios including spills, accidents, and holiday rushes, fostering engagement, and enhancing learning retention. Through the utilization of data-driven training methods, Walmart has seen notable improvements in employee engagement and performance. Moreover, by expanding VR training to nearly all 4,700 stores nationwide and providing 4 headsets per Walmart Supercenter, totaling 17,000 headsets provided by Strivr, Walmart has solidified its commitment to innovation and employee development on a massive scale. (Thompson 2024) This use-case is a prime example of what we at TalentForge XR aspire to accomplish.

In-house Training Solutions in regulated industries

Some large corporations may already have or opt to develop their in-house training programs using software tools like Vuforia, potentially limiting the market for external providers like TalentForge XR. However, TalentForge XR can still provide consulting services to evaluate and give guidance to their development approach.

Indirect Competitors

Online Learning Platforms (e.g., Coursera, Udemy): While not directly offering XR solutions, these platforms provide a wide range of online courses and educational content, which could be seen as an alternative to immersive training solutions. Ideally, as the adoption of VR headsets grows, TalentForge XR will replace these more traditional platforms.
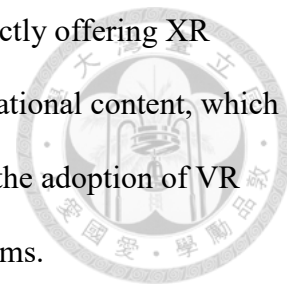
Competitive Advantages of TalentForge XR

At TalentForge XR, we have observed how large corporations thoroughly train their sales teams, giving them a significant advantage over small and medium-sized businesses. From avoiding voicemail and securing meetings, to providing proven scripts and shadowing senior reps, enterprises take a systematic training approach that SMBs often lack. They supply comprehensive marketing materials, teach closing deals effectively rather than just offering discounts, and impart vital product/service and industry knowledge for insightful questioning.

We recognize that effective technical sales requires more than reciting scripts - it hinges on an ability to uncover client needs through contextual questioning. That's why TalentForge XR is developing an MVP IT sales training solution to elevate SMB sales capabilities. Our product will guide representatives on quota expectations, commission structures, using sales tools effectively, and mastering their products/services. By studying recordings of successful calls/demos and simulating common objections, sales teams can enhance efficiency and drive revenue growth.

TalentForge XR understands the training gaps holding back SMB sales performance. Our immersive solution equips sales professionals with the knowledge and skills that large enterprises instill, empowering them to have more insightful conversations and close more deals.

Financial Projections

Table 4

Number of Clients before and after Churn

New License Clients		8	8	12	13	16	17
License Clients After Churn		8	11	16	20	25	29

Over the six-year period, new license client acquisitions increased steadily from 8 to 17 annually. Despite churn, the number of active license clients rose consistently from 8 to 29 during the same period, reflecting positive growth in both new acquisitions and client retention efforts.

Table 5

Income Statement Year 1 to 3

Revenue	Description	Year 1	Year 2	Year 3
Essential License	$12,500 average x 4 projects a year increase to 6 projects a year	$50,000	$50,000	$75,000
Premium License	$35,000 average x 4 projects a year increase to 6 projects a year	$140,000	$140,000	$210,000
	$100,000 large client	$0	$0	$0
License Renewals	Assumed 30% churn rate	$0	$133,000	$226,100
Support and Services	$5,000 x number of clients x 30% churn	$40,000	$55,000	$80,000
Consulting	$120/hour x 30 hours/month x 12 months projected 20% YoY growth	$43,200	$51,840	$62,208
Gap Analysis	$2,000 x 2 clients/month x 12 month x 2 sales reps	$48,000	$96,000	$96,000
Total Revenue		$321,200	$525,840	$749,308
Expenses	Description	Year 1	Year 2	Year 3

Fixed Assets				
Servers		$10,000	$0	$10,000
Custom PC		$5,000	$0	$0
GCP/Azure/AWS		$0	$1,000	$2,000
Software and Development Tools	Unity3D for businesses over $200,000 in revenue	$500	$500	$500
Office Furniture		$2,000	$0	$0
Pipedrive CRM	$14/month		$168	$168
Slack		$0	$0	$0
Trello		$0	$0	$0
Calendly	$10/month billed annually per user	$120	$360	$360
LinkedIn Sales Navigator	$79.99/month billed annually per user	$960	$2,880	$2,880
Google Meet		$0	$0	$0
8x8 VoIP	$12/month per user	$144	$432	$432
Operating Costs				
Owner		$80,000	$80,000	$80,000
UI/UX Developers		$60,000	$60,000	$60,000
Backend Developers	2 engineers Year 2	$80,000	$160,000	$160,000
Team Lead (Project Manager)	Full-time Employment			$120,000
Outsourced projects	$2500 per project	$20,000	$20,000	
3D Designer	Contract-to-hire Year 1		$70,000	$70,000
Junior Designer				
Sales Representatives	2 Sales Representatives		$120,000	$120,000
Commission	5% of deal size		$9,500	$9,500
Marketing Representative			$50,000	$50,000
Advertising and Promotions		$5,000	$10,000	$15,000
Travel and Tradeshows		$15,000	$30,000	$45,000
Legal and Accounting Fees		$5,000	$5,000	$10,000
General and Administrative			$2,000	$2,000

Meta Quest 2 Headsets	5 headsets per client	$12,000	$12,000	$18,000
IT Maintenance		$250	$500	$750
Research and Development		$0	$0	$0
Payroll Taxes and Benefits	11% taxes and benefits	$26,400	$62,645	$73,645
Total Expenses		$322,374	$696,985	$850,235

Key Takeaways

Year 1 the executive will be in charge of bringing in 8 deals. Year 2, the 2 sales representatives will be brought on, and responsible for 1 license a quarter, as depicted in Table 2. Revenue is expected to triple from $321,200 to $749,308 due to increased project volume and license renewals, and steady growth from consulting and gap analysis offerings. However, because of salaries for developers, designers, sales, marketing, and operating costs, the company is expected to receive losses the first 3 years totaling -$273,246. As stated in the operation plan, initially 1 frontend and 1 backend developer will be brought on to create the MVP. Design work will be outsourced to freelancers and firms to determine best fit. As project volume increases the company will hire additional staff such as another backend developer, a team lead, junior designer.

The license renewal forecast assumes a 30% churn rate. A critical factor in success is the ability to secure new clients and retain existing ones. Reducing churn rate by ensuring the client onboarding process is successful and will improve profitability. Streamlining the projects and scaling the business to handle a sudden influx of projects will require careful planning. Otherwise, contingency plans such as outsourcing projects to partners.

As our company is lean and remote, fixed asset expenses are relatively low. The projects will be kept on-premise servers, and cloud will only be used for data analytics. Most VR

development tools have free licenses until certain company revenue, and only cost a couple hundred.

Advertising and promotions budget will be spent on the marketing campaign for free license users. From user feedback, we will design marketing material such as promo videos, interview clips, whitepapers and case studies to put on the website and send in email campaigns. We will also post on Youtube, run Google ads, and be active on social media such as LinkedIn. Travel expenses are for on-site gap analysis and tradeshows. 2 clients a month is 24 gap analysis a year, and domestic flights are an estimated $400 round trip for 2 employees. That is 24 x $400 for a total of about $10,000 and tradeshows range from $5000 to $15,000 for a booth.

Overall, we predict 16 clients by year 3, with steady positive upside. By then, we should have a presence in the North Carolina Triangle Area and start to expand out. We should also have found our niche industry. Employing the right staff that can manage and execute and exceed client expectations is paramount for the company's success.

Table 6

Income Statement Year 4 to 6

Revenue	Description	Year 4	Year 5	Year 6
Essential License	$12,500 average x 4 projects a year increase to 6 projects a year	$75,000	$100,000	$100,000
Premium License	$35,000 average x 4 projects a year increase to 6 projects a year	$210,000	$280,000	$280,000
	$100,000 large client	$100,000	$0	$100,000
License Renewals	Assumed 30% churn rate	$357,770	$519,939	$629,957
Support and Services	$5,000 x number of clients x 30% churn	$100,000	$125,000	$145,000
Consulting	$120/hour x 30 hours/month x 12 months projected 20% YoY growth	$74,650	$89,580	$107,496
Gap Analysis	$2,000 x 2 clients/month x 12 month x sales reps	$144,000	$144,000	$144,000
Total Revenue		$1,061,420	$1,258,519	$1,506,453
Expenses	Description	Year 4	Year 5	Year 6

Fixed Assets				
Servers		$0	$0	$0
Custom PC		$0	$0	$0
GCP/Azure/AWS		$5,000	$5,000	$5,000
Software and Development Tools	Unity3D for businesses over $200,000 in revenue	$500	$500	$500
Office Furniture		$0	$0	$0
Pipedrive CRM	$14/month	$168	$168	$168
Slack		$0	$0	$0
Trello		$0	$0	$0
Calendly	$10/month billed annually per user	$360	$360	$360
LinkedIn Sales Navigator	$79.99/month billed annually per user	$2,880	$2,880	$2,880
Google Meet		$0	$0	$0
8x8 VoIP	$12/month per user	$432	$432	$432
Operating Costs				
Owner		$80,000	$80,000	$120,000
UI/UX Developers		$60,000	$60,000	$60,000
Backend Developers		$160,000	$160,000	$160,000
Team Lead (Project Manager)	Full-time Employment	$120,000	$120,000	$120,000
Outsourced projects	$2500 per project			
3D Designer		$70,000	$90,000	$90,000
Junior Designer		$50,000	$50,000	$50,000
Sales Representatives	3 Sales Representatives	$180,000	$180,000	$180,000
Commission	5% of deal size	14250	$14,250	$19,000
Marketing Representative		$50,000	$50,000	$50,000
Advertising and Promotions		$20,000	$20,000	$20,000
Travel and Tradeshows		$45,000	$45,000	$45,000
Legal and Accounting Fees		$10,000	$10,000	$10,000
General and Administrative		$2,000	$2,000	$2,000
Meta Quest 2 Headsets	5 headsets per client	$18,000	$24,000	$24,000
IT Maintenance		$1,000	$1,000	$1,000

Research and Development		$0	$50,000	$100,000
Payroll Taxes and Benefits	11% taxes and benefits	$86,268	$88,468	$93,390
Total Expenses		$975,858	$1,054,058	$1,153,730

Key Takeaways

We expect to make over a million in revenue in Year 4, and $1.5 million by year 6. We forecast

our ability to acquire 1-2 larger sized clients at $100,000 each after our track record of clients.

By year 6 we hope to have 29 clients, taking into consideration churn. Year 4 we will also bring

on another sales representative, for a total quota of 12 new clients a year. Ideally, our marketing

efforts and tradeshows should also bring an influx of new clients. With the number of clients, we

also plan to hire a junior designer to assist the 3D designer and give the 3D designer a raise and

promotion. Sales representatives that outperform their quota also have a chance for a raise. One

factor to consider is whether we will need more capacity on our development team in order to

handle the number of clients. The project process should also be streamlined, but sometimes staff

may have personal issues or schedule conflicts that may impact the business. However, even if

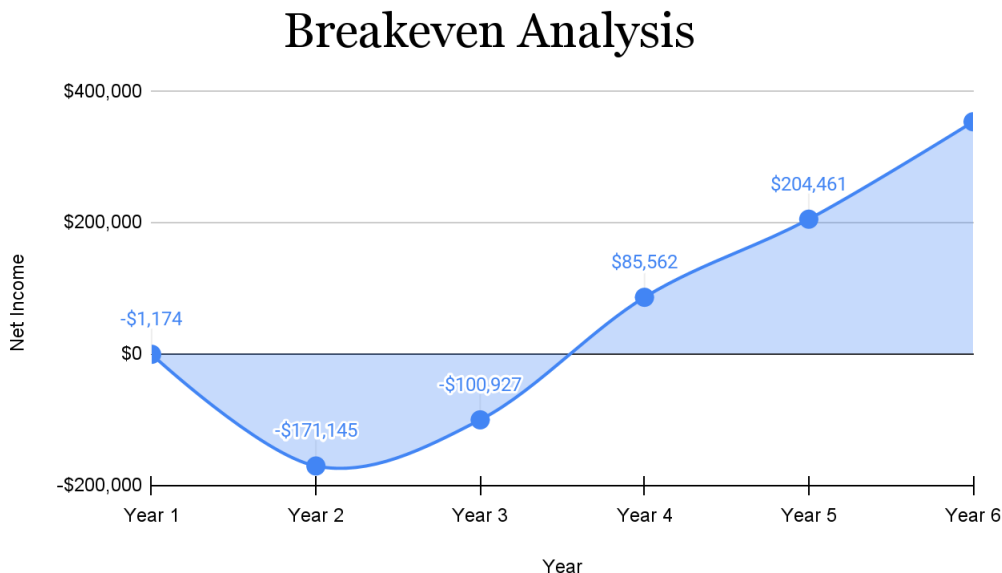we brought on 2-3 additional engineers, we still expect to be profitable and breakeven by year 6.

Table 7

Net Income and Breakeven

		Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Net income		-$1,174	-$171,145	-$100,927	$85,562	$204,461	$352,723
Breakeven		-$1,174	-$172,319	-$273,246	-$187,684	$16,777	$369,500

Figure 3

Breakeven Analysis

Conclusion

The business aims to achieve profitability by the end of its fourth year, with breakeven projected for the fifth year. Key to sustaining consistent revenue growth is the significant focus on license renewals, ensuring a steady income stream over time. Given the heavy reliance on the development team and designers to produce content, it's crucial to establish partnerships with external firms. These partnerships provide flexibility to outsource projects when additional capacity is needed, enabling the company to scale efficiently and meet client demands effectively while maintaining quality standards.

Uncertainty, Risks, and Future Plans

Uncertainty

While our AR/VR training solutions offer exciting opportunities in an emerging market, we must carefully navigate several potential risks and uncertainties. We may face extended sales

cycles as organizations evaluate the value proposition and integration of immersive training. Despite operating in a relatively new space, we anticipate a competitive market landscape, requiring strategic differentiation and robust marketing efforts. Furthermore, certain industries like manufacturing, healthcare, law enforcement, and emergency services may have established in-house training solutions or stringent regulatory requirements, making target markets more restricted for entry. Sectors with limited budgets, such as education, could also pose financing hurdles.

Risks

As a startup navigating an uncertain and ever-evolving market, we must carefully assess several potential risks. For instance, clients might unexpectedly terminate the project due to unforeseen circumstances. Additionally, recruiting developers who lack the necessary skills poses the risk of human error, leading to missed deadlines and subpar outcomes. Furthermore, the threat of major competitors entering our market space directly could render our product and service offerings obsolete. Hence, it is crucial for us to maintain vigilance, agility, and responsiveness in addressing these risks to ensure our competitiveness and long-term success.

Future Plans

As our customer base rapidly expands, we will strategically scale our development team to ensure we have the necessary resources and expertise to meet the growing demands and requirements of our increasing influx of clients. We will bolster our sales and marketing efforts by scaling our respective teams to effectively reach and target a wider audience outside of the Triangle Area, driving further business growth. A large portion of our revenue is from license renewals, so it is vital to improve customer success in order to reduce churn rates and secure renewals. Securing capital from investors is essential for funding expansion and scaling

operations. With adequate financial backing, we can expand the team, and invest in research and development initiatives aimed at innovating our offerings. In this context, allocating resources to incorporate further data analytics with machine learning and AI, or develop a consumer-facing e-learning virtual reality (VR) application for the Meta Quest App store as a new stream of revenue, are viable strategic moves. While focused on raising capital, we would also consider the possibility of a strategic sale after 5 years if there were interested parties.

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Appendix

Interview with Lu Ling Engineer for Implementation plan

The App needs UI part, backend service, data storage, data warehouse, data pipeline, analytic data storage, and dashboard to show the metrics.

The UI part: have 2 frontend engineers for the UI implementation who is familiar with the engine you mentioned, for MVP, the UI part can be as simple as possible, with simple features such as upload content, play content, content management, album, etc. Similar as TikTok, you upload video, and play the video, but it's more simple than TikTok because it won't involve the personal recommendation (recommendation is another huge topic to discuss) The backend service implementation will begin with a single server machine to handle the projected data scale for the initial small business-to-business app launch. This server will accept content upload requests from users, process the video data, and save it into a database. An SQL database is recommended for simplicity in these early stages. When receiving playback requests, the backend will load the specific requested video from the database and return it to the UI for the user to view. For large video files, this straightforward implementation may result in slow load times as customers potentially need to wait minutes for hours of video content to fully transfer. Optimizations like caching between the backend and database can be explored later to improve performance, but are an unnecessary cost up front.

Logging all user behaviors and traffic patterns hitting the backend service is crucial for monitoring and incident response. Tracking real-time metrics such as requests per second allows for detecting anomalies that could indicate issues requiring immediate engineer intervention when on-call. Alarm configurations must be set for all critical metrics. While a data analysis

feature isn't recommended for the initial launch, planning for data pipelines upfront is wise given their complexity.

A daily batch job will replicate data from the backend's database into a separate data warehouse intended for analytics workloads. Simultaneously, as the backend writes data to its database, it will also send copies to a message queue. This allows implementing of two separate pipelines - one for batch analytics and one for real-time streaming. The batch pipeline will run daily, for example at 5pm, consuming the day's data from the warehouse. It will perform ETL processes like aggregating raw unstructured data into summarized results, then load the output into storage like a Hive data lake. Using the data warehouse instead of the backend database directly prevents overly taxing the operational database.

In parallel, a real-time streaming pipeline will consume the continuous data stream from the backend's message queue. It will run real-time aggregations like calculating video plays per hour and store the results in a low-latency data store or feed them directly into a dashboard for visualization. This streaming pipeline complements the daily batch analytics by providing up-to-the-moment monitoring capabilities.

The combination of batch and streaming pipelines using a data warehouse allows performing a wide range of analytics - from daily reports to real-time monitoring. The output data stores can then integrate with dashboarding tools to visualize the processed data for insights into content performance, user engagement, and more. This architecture lays the foundation for robust data analytics capabilities as the app scales.

For the app's technology infrastructure, provisioning servers and cloud services from a provider like AWS will be necessary. The exact service requirements and associated costs require further analysis based on the chosen tech stack, projected scale of the user base and
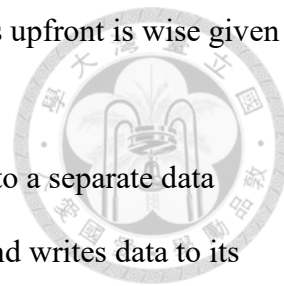
content, and AWS's specific pricing models for needed services like EC2, S3, databases, and more. Once the technical requirements are finalized, AWS's pricing calculator can estimate the monthly and annual expenditures.

In summary, the operations plan begins with a lean 3-person engineering team to handle initial development. As growth demands it, the teams for UI, backend, data, and leadership will scale accordingly. Cloud infrastructure can flex its provisioned AWS services based on evolving scale and costs. This combined human capital and cloud infrastructure approach allows starting small and scaling resources as required.