

# MythBuster.AI

One click to certainty

## Group 1

It rained in New York on April 14th.

True

Abhishek Dharmendra Rawal

Cade Lanza fame

Fahad Alhussain

Hiba Khan

Kunal Pingale

Shivani Sawant

Trent Blatz

MIE 671, Nehal Patel

2025

# **MythBuster.AI: AI-Powered Deepfake Detection – Real-Time Media Authentication**

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## **PRODUCT VISION**

To establish MythBuster.AI as the global standard for real-time media authentication, ensuring that digital content remains authentic, objective, and trustworthy, thereby combating misinformation and protecting individuals, organizations, and society.

## **PRODUCT MISSION**

MythBuster.AI empowers users with real-time deepfake detection using advanced AI and forensic tools. Designed for journalists, creators, and the public, it verifies videos, images, and audio instantly—stopping misinformation before it spreads.

# GOALS AND OBJECTIVES

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Our team aims to tackle the growing threats posed by deepfake technology and generative content, including:

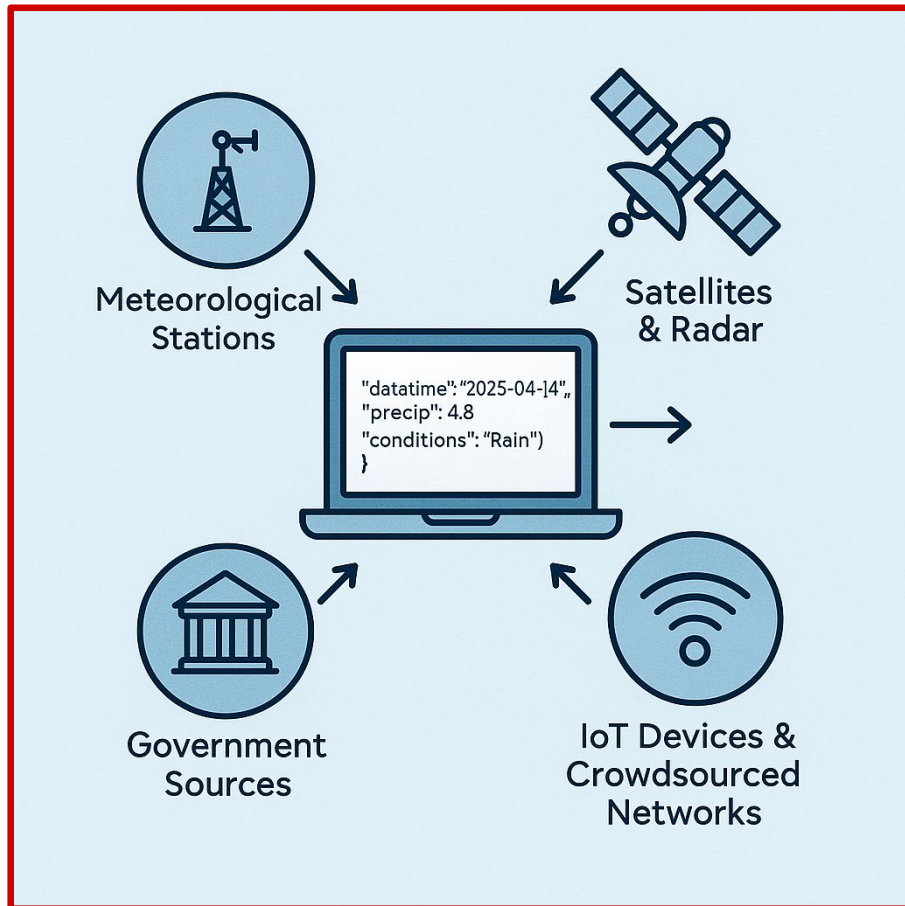
- ✓ Misinformation & Fake News
  - ✓ Ensuring Content Authenticity in Political & Religious Discourse
  - ✓ Preventing the Spread of Misleading Information by Content Creators
    - ✓ Reputation Damage
    - ✓ Fraud & Security Threats
    - ✓ Lack of Real-Time Verification

## PROBLEM STATEMENT & OPPORTUNITY (current vs future state)

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CURRENT REALITY	WITH MythBuster.AI
<i>Deepfakes &amp; AI-generated content</i> are increasingly indistinguishable from real media.	Real-time detection of manipulated videos, images, and audio using AI-powered forensic tools.
<i>Misinformation, political propaganda</i> , and fake news spread rapidly on social platforms.	Authentic, verified content helps reduce manipulation and rebuild public trust.
<i>No easy, accessible solution</i> exists to verify content—especially in real time.	One-click verification for journalists, fact-checkers, governments, and the public
<i>Public confusion and reputational damage</i> caused by manipulated content.	Transparency and trust restored in the digital ecosystem with clear source references and accuracy indicators.

## THE TECH AND DEMO



- APIs are purchased from verified local and national media houses (e.g., The New York Times, AP, local weather services).
- The API instantly pulls data relevant to the user's query or highlighted statement (e.g., weather records, political facts).
- Statements are matched against trusted sources to determine accuracy: True, False, or Opinion
- Multiple APIs allow expansion from regional (e.g., New York, Washington) to national and global coverage.
- The product auto-detects content type and activates the relevant API without manual input.

## Key Business Requirements

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**S**

### **Scalable Infrastructure**

Cloud-based, cost-effective infrastructure to handle high volumes of media analysis

**C**

### **Compliance**

Adherence to AI regulations like the DEFEND Act and global data privacy laws

**A**

### **API Integration**

Collection of data through APIs from trusted sources like media houses and government sources

**R**

### **Real-time Detection**

Real-time deepfake identification for journalists, governments, and platforms

**R**

### **ROI Metrics**

Clear metrics for reporting to investors and internal stakeholders

**E**

### **Extension Activation**

The extension auto-triggers when users highlight text on supported websites

# Market Strategy & Planning: SWOT Analysis

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## Strengths

- Comprehensive Media verification
- Real-time authentication
- Diverse Target Audience
- Clear Value Proposition
- Emphasis on User Experience

**S**

## Weaknesses

- Unproven
- Market Education
- Accuracy – Continual improvements needed to reach near-perfect detection
- Resource Limitations
- Technical Complexity

**W**

## Opportunities

- High Demand to spot fake news and videos.
- Competitors lack in accessibility, or user experience, which MythBuster.AI can improve.
- Develop superior detection across all media
- Serve diverse market segments

**O**

## Threats

- Rapid Deep-Fake industry evolution
- Established Competitors
- Users may doubt product effectiveness.
- Evolving laws may impact development
- Misuse of MythBuster.AI could improve DeepFake creation.

**T**

# Market Strategy & Planning: 5C Analysis

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Company	Customers	Competitors	Collaborators	Climate
Internal strengths, weaknesses, resources, etc.	Customer needs, experiences, behaviors	Competition and their current market offerings	Potential partnerships; benefits and values	State of the market the product will be injected to
<p><b>Strengths</b></p> <ul style="list-style-type: none"><li>• Deepfake-focused</li><li>• Multi-format detection</li><li>• Specialize in real-time capability</li><li>• Company aims for unbiased public trust</li></ul> <p><b>Weaknesses</b></p> <ul style="list-style-type: none"><li>• New and unproven</li><li>• Longer development timeline</li><li>• Limited initial resources as a startup</li></ul> <p><b>Resources and Capabilities</b></p> <ul style="list-style-type: none"><li>• Access to AI/Deepfake models for training</li><li>• Access to news source databases</li></ul>	<p><b>Target Customers</b></p> <ul style="list-style-type: none"><li>• Social media users</li><li>• News readers,</li><li>• Content creators and enthusiasts</li></ul> <p><b>Customer Desires</b></p> <ul style="list-style-type: none"><li>• Identify deep fakes</li><li>• Identify misinformation</li><li>• Detecting AI in news &amp; creative media</li><li>• Use the tool seamlessly in everyday tasks</li></ul> <p><b>Customer Behavior &amp; Acquisition</b></p> <ul style="list-style-type: none"><li>• Subscriptions, prefer low monthly costs</li><li>• Premium models for latest tools</li><li>• Communication &amp; promotion directly through social media</li></ul>	<p><b>Microsoft Video Authenticator</b></p> <ul style="list-style-type: none"><li>• Microsoft's resources</li><li>• Detects subtle visual cues (fades, grayscale)</li><li>• Focused on political content, not public use</li></ul> <p><b>Google DeepFake Protection</b></p> <ul style="list-style-type: none"><li>• Google's resources</li><li>• Primarily research-driven</li><li>• Not yet a commercial product</li></ul> <p><b>Facebook DeepFake Protection</b></p> <ul style="list-style-type: none"><li>• Meta's AI and resources</li><li>• Trained using Meta's own generative tools</li><li>• Focused on facial deep fakes</li><li>• Designed for public &amp; businesses</li></ul>	<p><b>Partnerships</b></p> <ul style="list-style-type: none"><li>• Database partnerships with local news stations of an area provide cross verification of data</li></ul> <p><b>Stakeholders</b></p> <ul style="list-style-type: none"><li>• Investors focused on deepfake protection can provide financial backing for development</li><li>• Early partnerships with clients provides monetary investment and loyalty</li></ul>	<p><b>Climate</b></p> <ul style="list-style-type: none"><li>• Social media &amp; reality are more politically divided than ever with misinformation spread</li><li>• AI-generated content will become more challenging to identify</li><li>• AI is constantly evolving</li><li>• Social media is highly impacted by AI and misinformation</li><li>• Evolving government regulations and AI policies</li><li>• The technology landscape is changing allowing more potentially harmful AI uses</li></ul>

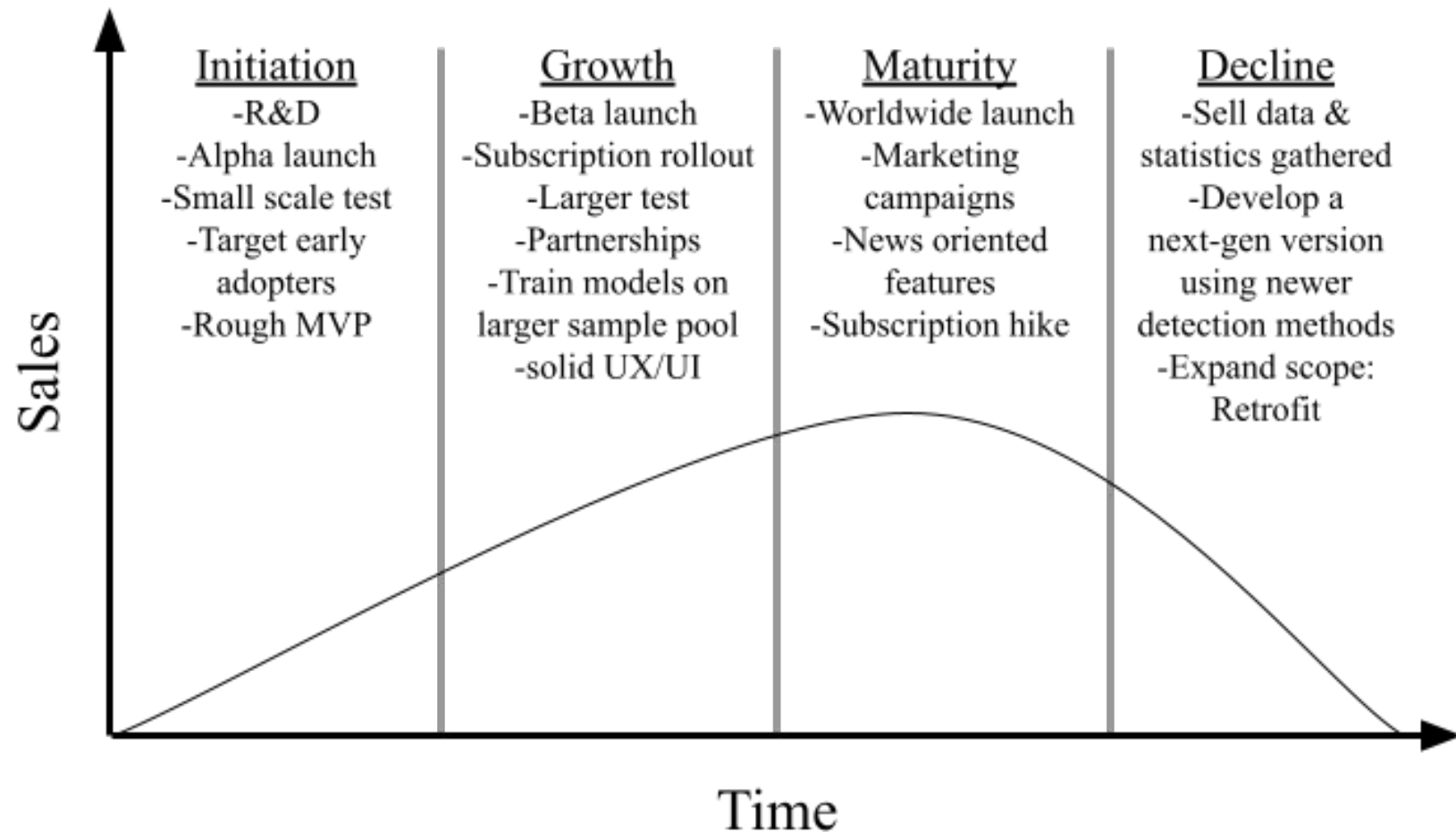


# Market Strategy & Planning: PESTEL Analysis (USA)



## Overview of Product Life Cycle expectations

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## Market Assessment: Growth Stage

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As more people discover and start using MythBuster.AI, we move into the growth stage



## Product Risk Identification

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### **T** Technical Risk

Low detection accuracy for new, sophisticated deepfakes

Current confidence is 86%; target = 100%

**Mitigation:** Monthly AI model retraining; user feedback loops

### **O** Operational Risk

Downtime during critical news events

**Mitigation**  
Cloud auto scaling; real-time system monitoring

### **R** Regulatory Risk

Non-compliance with AI/privacy laws

**Mitigation**  
Regular legal compliance checks; updated models

### **A** Adoption Risk

Difficulty integrating with user platforms  
low engagement

**Mitigation**  
API partnerships  
simplified models

# Lifecycle Phase Risks

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## Launch

- MVP bugs, delayed API integration

 **Mitigate:** Beta testing, phased rollout

## Growth

- Tech giant competition, Customer Retention

 **Mitigate:** Loyalty programs + feedback-driven updates, rapid AI updates

## Maturity

- Complacency, rising R&D costs

 **Mitigate:** Tiered pricing, reinvestment

## Update

- Tech obsolescence, user backlash

 **Mitigate:** Modular redesign, user co-design

## Cost, Schedule & Performance Mitigation

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### **COST MITIGATION**

- Scalable cloud services to optimize costs
- Efficient algorithms to reduce processing needs
- Cloud usage monitoring to prevent overages



### **SCHEDULE MITIGATION**

- Agile development (short sprints)
- Parallel development and testing
- Clear milestones and automated testing



### **PERFORMANCE MITIGATION**

- Monthly AI model retraining
- Real-time monitoring and auto-scaling
- Fast bug-fix sprints and feedback loops

# Product Launch Roadmap

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**MythBuster.AI will follow a phased launch strategy:**



**Our plan is to gradually grow while building trust, collecting feedback, and improve performance.**



# Product Technology Roadmap

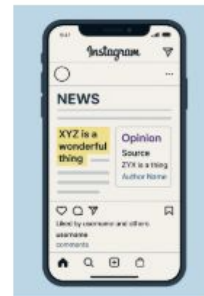
1st 6 months



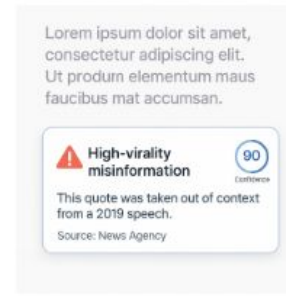
Next 6 months



YEAR 2



YEAR 3



YEAR 4



MVP – Foundation Build

**Goal:** Launch core product with two primary fact-checking capabilities.

- Static deepfake detection (video, image, voice)- Upload/ URL based
- Output: “Real” / “Fake” / “Possibly Altered”
- Regional News Fact- Checking

Washington and NewYork  
(Moderate Region)

Refinement + Region expansion

**Goal:** Expand coverage and improve accessibility.

- Real-time deepfake detection
- Integrate national media APIs
- Auto Activation
- Users can highlight sentences → Extension analyzes → Output: “True,” “False,” “Opinion”
- Classify content type: *Factual claim vs Opinionated interpretation*

USA

Multimedia Fact-Checking

**Goal:** Fact-check videos and social media posts.

- Video Fact-Checking
  - Extract transcript using speech-to-text models
  - Display claim verification + actual quote from trusted sources
- Social Media Integration (Twitter/X, YouTube, Instagram support)
  - Twitter/X, YouTube, Instagram support

Global launch

Intelligence and Personalization

**Goal:** Enhance accuracy, explainability, and user trust.

- Alerts for “high-virality” misinformation
- Add context (e.g., “This quote was taken out of context from a 2019 speech”)
- Show source excerpts, dates, and confidence score

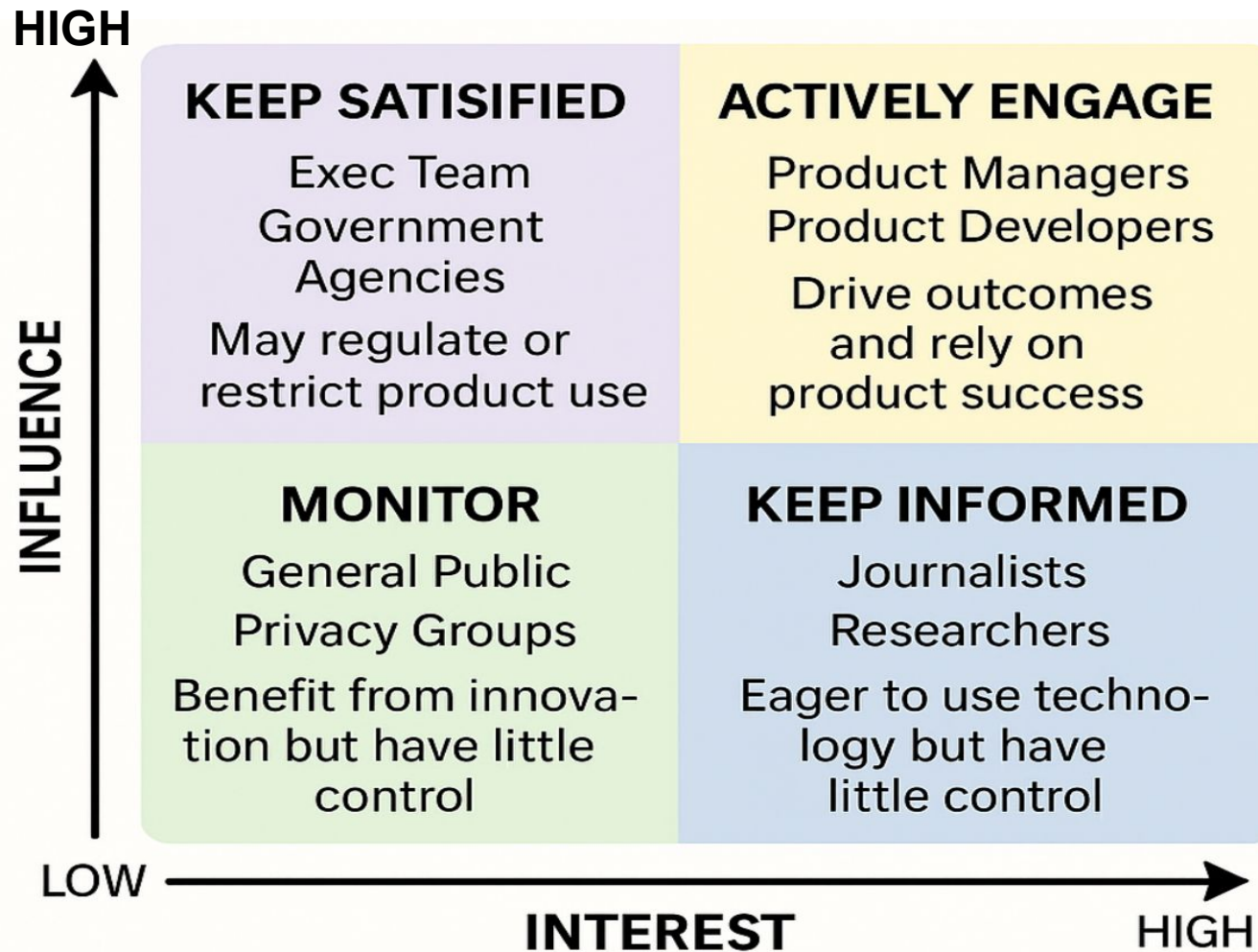
- Distinguish between what was *actually said* vs *how it was interpreted*
- Use LLMs to detect sarcasm, satire, or misleading headlines
- Custom Region and Topic Filters
  - Let users follow regions/ topics for real-time updates



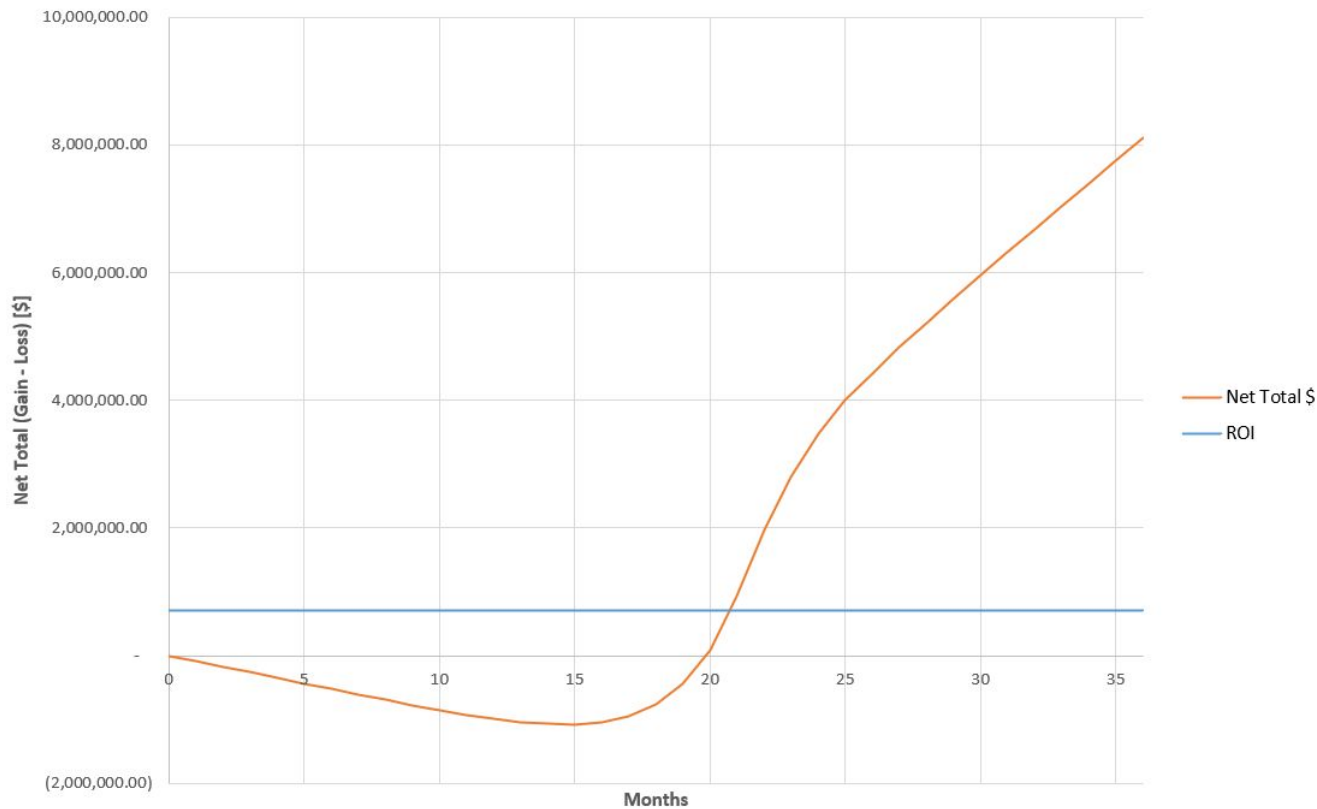
**Our Go-to-Market approach focuses on awareness, accessibility, and integration**



## Key Stakeholders Matrix



# Market Growth & Cash Flow



## GAIN

Initial investment

700,000.00 \$

Cost of subscription

10 \$ / monthly

Subscription-base % increase per month

50 %

(i.e. how many more users pay per month)

First month launch amount subscribed

500

## LOSS

Average yearly salary

80,000 \$ yearly

Amount of employees

10

Other overhead (supplies, maintance, ads)

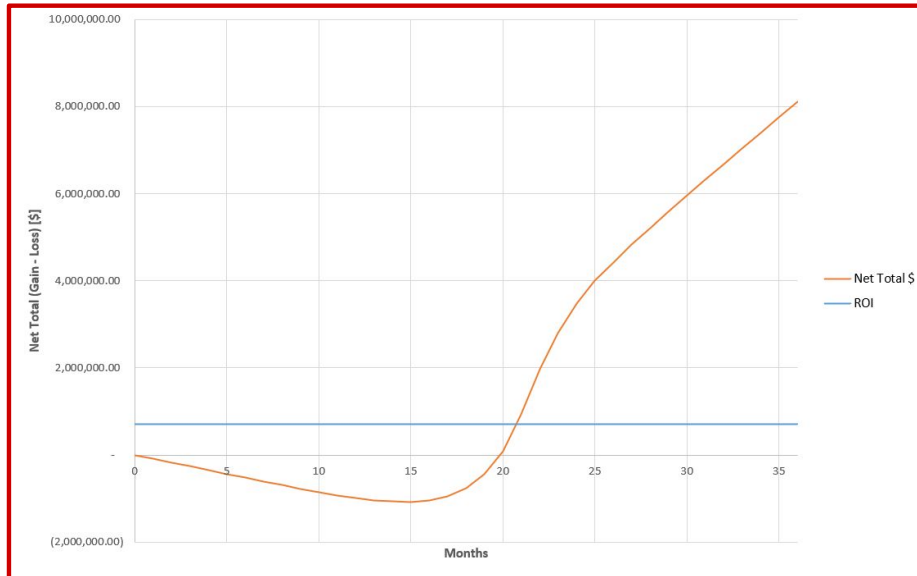
250,000 \$ yearly

"Raw material" per unit product

0.5 \$ / subscription

(i.e. cost of running servers per user, GPUs)

# Return on Investment & Financial Viability



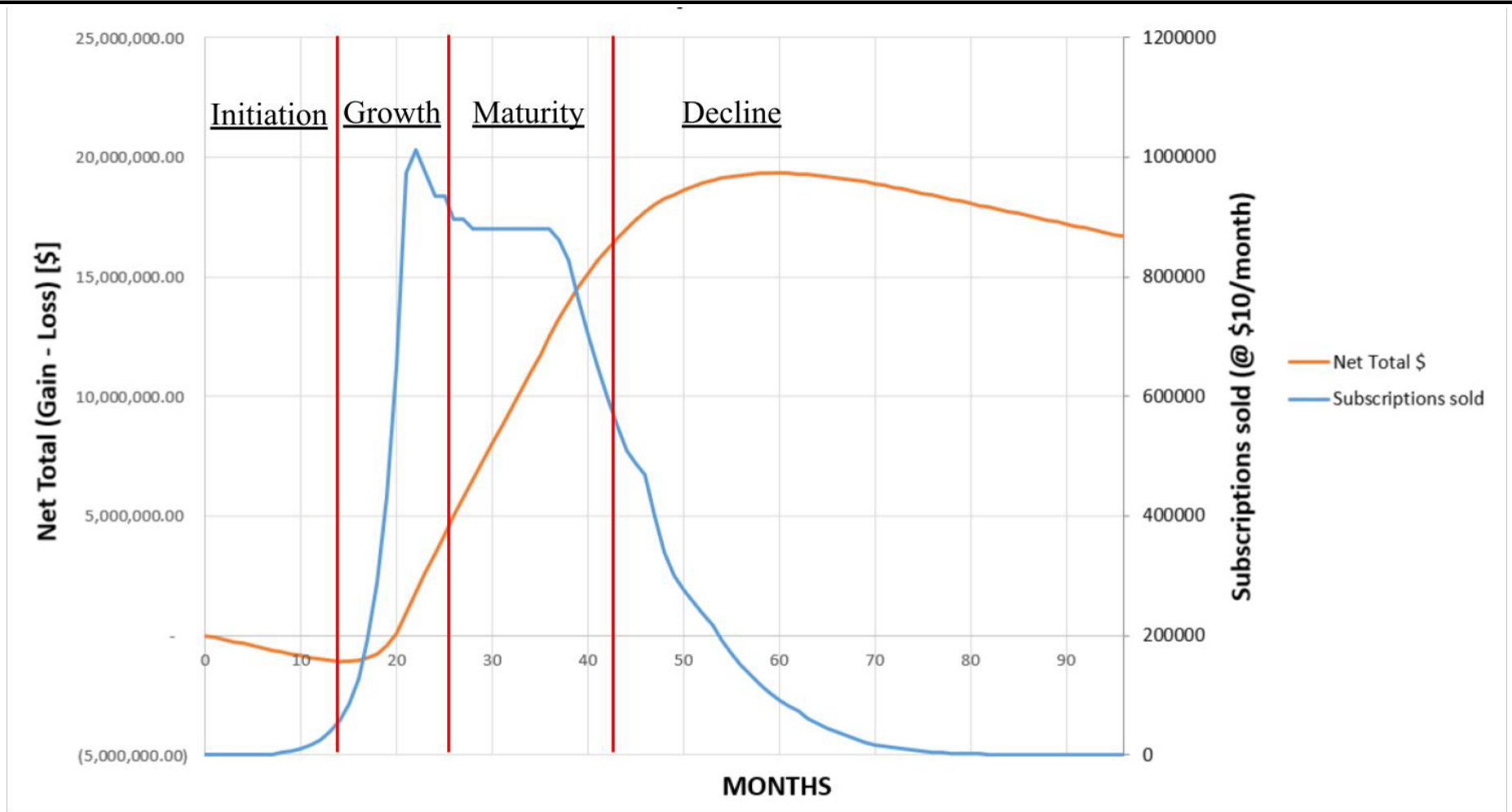
Subs sale starts Q3 2025 (8 months) (after beta)

ROI break even on Q3 2026 (193,620 subscriptions)  
(20 months)

1,057% increase on ROI after 3 years (Q1 2028)  
(\$8.1m net total gain, @1,184,580 subscriptions)

STATS					
MONTH	TOTAL		subscriptions gained	subs gain per month	
6	0	subscriptions sold by Q3 2025	-	-	
12	6,594	subscriptions sold by Q1 2026	6,594	1,099	
18	85,498	subscriptions sold by Q3 2026	78,904	13,151	
24	586,872	subscriptions sold by Q1 2027	501,374	83,562	
30	903,168	subscriptions sold by Q3 2027	316,296	52,716	
36	1,184,580	subscriptions sold by Q1 2028	281,412	46,902	

## Product Life Cycle Prediction / Simulation



## After Market Strategy (retrofit and expansion)

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- Keep loyal subscribers happy & engaged; develop new features & support
- Retrofit: Decreasing price of subscription or creating cheaper options

### STEPS:

1. Installed Base Need: Log majority demographic of subscribers
2. Market Definition: Provide support & maintenance for this demographic (to retain)
3. Customer Definition: Retrofit & tailor support, provide public FAQ (paid users)
4. Product Definition: Feature updates & online customer support (paid users)
5. System Definition: Open new markets & support loyal subscribed users

## Retrofit (Alternate pricing) & effects on ROI

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Subscription Price \$/month	3yr net value \$	Investment: \$700,000 ROI % increase after 3 years
6.00	3.36m	380.74%
8.00	5.7m	719.19%
<b>10.00</b>	<b>8.1m</b>	<b>1,057%</b>
11.00	9.28m	1,227%
12.00	10.47m	1,396%
13.00	11.66m	1,565%
14.00	12.86m	1,734%
15.00	14m	1,903%
17.00	16.3m	2,242%
20.00	19.95m	2,749%

## CONCLUSION

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***Thank you for your  
attention***

***“One click to certainty”***



# BACKUP SLIDES (if needed)

More detailed ROI

//Cost roadmap

(does not include year 3)

	Months	PER MONTH		TOTAL		w/ investment		NOTES
		Loss	Gain	Net loss	Net gain	Net total	Net total	
year 1	0	0	0	0	0	-	700,000.00	
	1	87500	0	87500	0	(87,500.00)	612,500.00	ALPHA LAUNCH
	2	87500	0	175000	0	(175,000.00)	525,000.00	
	3	87500	0	262500	0	(262,500.00)	437,500.00	
	4	87500	0	350000	0	(350,000.00)	350,000.00	
	5	87500	0	437500	0	(437,500.00)	262,500.00	BETA LAUNCH
	6	87500	0	525000	0	(525,000.00)	175,000.00	
	7	87500	0	612500	0	(612,500.00)	87,500.00	PUBLIC LAUNCH
	8	87750	5000	700250	5000	(695,250.00)	4,750.00	SUBSCRIPTION LAUNCH
	9	87875	7500	788125	12500	(775,625.00)	(75,625.00)	
	10	88062.5	11250	876187.5	23750	(852,437.50)	(152,437.50)	
	11	88343.75	16875	964531.25	40625	(923,906.25)	(223,906.25)	
	12	88765.63	25312.5	1053296.875	65937.5	(987,359.38)	(287,359.38)	
year 2	13	89398.44	37968.75	1142695.313	103906.25	(1,038,789.06)	(338,789.06)	
	14	90347.66	56953.13	1233042.969	160859.375	(1,072,183.59)	(372,183.59)	FULL / APP LAUNCH
	15	91771.48	85429.69	1324814.453	246289.0625	(1,078,525.39)	(378,525.39)	
	16	93907.23	128144.5	1418721.68	374433.5938	(1,044,288.09)	(344,288.09)	
	17	97110.84	192216.8	1515832.52	566650.3906	(949,182.13)	(249,182.13)	
	18	101916.3	288325.2	1617748.779	854975.5859	(762,773.19)	(62,773.19)	
	19	109124.4	432487.8	1726873.169	1287463.379	(439,409.79)	260,590.21	Not negative
	20	119936.6	648731.7	1846809.753	1936195.068	89,385.31	789,385.31	ROI hit
	21	136154.9	973097.5	1982964.63	2909292.603	926,327.97	1,626,327.97	
	22	147089.8	1191796	2130054.441	4101088.817	1,971,034.38	2,671,034.38	
	23	136154.9	973097.5	2266209.318	5074186.351	2,807,977.03	3,507,977.03	
	24	127226.5	794530.8	2393435.858	5868717.161	3,475,281.30	4,175,281.30	
year 3	25	119936.6	648731.7	2513372.443	6517448.85	4,004,076.41	4,704,076.41	
	26	113984.4	529687.2	2627356.803	7047136.056	4,419,779.25	5,119,779.25	
	27	113452.8	519056.8	2740809.645	7566192.899	4,825,383.25	5,525,383.25	