

# Project: Crucial

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Developing games and UIs through story.

Imagine a world where creating a video game is as simple as telling a story. That's the world we're building with **Crucial**. Our innovative software uses the power of Artificial Intelligence and Natural Language Processing to transform your ideas into playable games. No coding skills? No problem. With **Crucial**, anyone who can write a story can create a game.

Think of the educators who can turn lessons into interactive experiences. The storytellers who can bring their narratives to life. The creative individuals who've always dreamed of making their own game but were held back by the technical barrier. **Crucial** is for them.

But we're not just about game creation. Our software also integrates with powerful UI/UX frameworks, allowing you to design stunning and personalized interfaces for your applications.

**Crucial** is more than just a game development tool. It's a platform for creativity, a catalyst for innovation, and a gateway to a world where everyone can be a game developer or UI / UX creator. Join us as we democratize game development and empower everyone to bring their ideas to life.

SmallRoom Technologies Inc.

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<i>Executive Summary</i>	4
<i>Objectives</i>	4
<i>Product Description</i>	4
<i>Company Overview</i>	5
<i>Crucial Business Model</i>	5
Software as a Service (SaaS)	5
Data Packs and Add-ons	5
Plugin and Data Pack Contributors	5
Pricing Structure	6
Operations and Management	6
<i>Financial Projections</i>	7
Cost Reduction	10
<i>Milestones</i>	10
<i>Risk Assessment</i>	11
Exit Strategy	11
<i>Crucial Game / UI Development Features</i>	12
AI-Powered Game Development:	12
No Coding Skills Required:	12
Customizable Features:	12
Collaborative Platform:	12
Real-Time Updates:	12
Cross-Platform Compatibility:	12
Community Support:	12
Educational Resources:	12
Secure and Reliable:	12
Scalable:	12
Open Source and Freemium Model:	12
UI/UX Interface Development:	13
Integration with UI Frameworks:	13
Game Engine-Powered Frontends:	13
Responsive Design:	13
Interactive Prototyping:	13
User Testing and Feedback:	13
Version Control:	13
Accessibility Features:	13

<b>Performance Optimization:</b>	13
<b>Animation and Transition Tools:</b>	13
<b>Crucial Store/Library:</b>	13
<b>Game/UI Assets:</b>	13
<b>Gaming/UI Frameworks:</b>	14
<b>UI/Game Templates:</b>	14
<b>Community Contributions:</b>	14
<b>Quality Control:</b>	14
<b>Easy Integration:</b>	14
<b>Regular Updates:</b>	14
<b><i>Market Analysis and Strategy</i></b>	14
<b>Market Opportunity</b>	14
<b>Target Market</b>	14
<b>Competitive Landscape</b>	14
<b>Marketing Objective</b>	16
<b>Target Audience</b>	16
<b>Unique Selling Proposition (USP)</b>	16
<b>Marketing Channels and Tactics</b>	16
<b><i>Capital Management and Investment</i></b>	18
<b>Reinvesting in the business:</b>	18
<b>Mergers and acquisitions:</b>	18
<b>Stock buybacks:</b>	18
<b>Paying down debt:</b>	18
<b>Investing in financial instruments:</b>	18
<b>Investing in marketable securities:</b>	18
<b>Establishing a reserve fund:</b>	18
<b>Employee training and development:</b>	18
<b>Corporate social responsibility initiatives:</b>	18
<b>Real estate investment:</b>	18
<b><i>Funding Requirements</i></b>	19
<b><i>Platform Infrastructure</i></b>	19

## Executive Summary

Our company, Smallroom Technologies Inc., is a pioneering software development startup that is set to revolutionize the gaming industry with an innovative application that uses Natural Language Processing (NLP) and Artificial Intelligence (AI) to transform text descriptions into playable games and advance UI/UX interface development.

Our flagship product, Crucial, is a game / UI / UX development tool that democratizes the creation of video games and user interfaces by making it accessible to anyone who can write a story or describe in detail how they want their interface to look. By leveraging an AI model trained in a 3D rendering engine, our software maps descriptive text to specific object creation methods, effectively translating a narrative into a playable game or state of the art UI interfaces. This unique approach to game / UI development lowers the barrier to entry, fostering creativity and innovation among a wider audience.

The market for game / UI development tools is growing, driven by the increasing popularity of video games across all age groups and the rise of independent game developers. To add to the fervor, more and more UI/UX frontends are leveraging the realm of game engines to create the most interactive and seamless application front ends ever seen. However, traditional game and UI frontend development requires technical skills that are a barrier for many potential creators. Our product fills this gap in the market, offering a user-friendly solution that requires little to no coding skills.

Our vision is to empower storytellers, educators, and creative individuals to bring their ideas to life in the form of video games and similar tools to create the most interactive applications to date. We aim to capture a significant share of the game / UI development market, driven by our innovative approach, user-friendly design, and commitment to customer satisfaction.

We are seeking 2.4 million dollars in funding to finalize the development of our software, launch a comprehensive marketing campaign, and scale our operations to meet anticipated demand.

Smallroom Technologies Inc. is poised to alter the gaming and UI frontend industry, offering a unique product that combines the power of AI with the creativity of storytelling. With your support, we can make game development a possibility for everyone.

## Objectives

- Develop and launch the Crucial web-based platform within 12 months.
- Provide game / UI development services and asset packs.
- Achieve a user base of 1000 paying customers within the first year of operation.
- Expand the service offering to include additional AI-driven NLP to code capabilities.
- Achieve a 20% annual growth rate in revenue and user base.

## Product Description

Project Crucial is a revolutionary game development tool that uses Natural Language Processing (NLP) and Artificial Intelligence (AI) to transform text descriptions into playable games. It democratizes game development by making it accessible to anyone who can write a story.

In addition to its game creation capabilities, Project Crucial also integrates with powerful UI/UX frameworks, allowing users to create visually stunning and highly interactive frontends for their applications. This feature gives users the freedom to design unique and personalized interfaces, enhancing the gaming and UI creation experience and setting their apps apart from the rest.

Whether you're a storyteller, an educator, or a creative individual, Project Crucial empowers you to bring your ideas to life in the form of visually stunning games or UIs. With its user-friendly design and

innovative features, Project Crucial is set to disrupt the visual game / UI development industry and foster creativity and innovation among a wider audience.

## Company Overview

Smallroom Technologies Inc., owned and founded by Wadih Frederick Khairallah, is a forward-thinking technology company specializing in rapid prototyping, concept development, and innovative technology think tank. We are a company that thrives on creativity and innovation, constantly pushing the boundaries of what's possible in the tech world.

Our mission is to transform abstract ideas into tangible realities. We believe in the power of technology to solve complex problems and improve lives, and we are committed to developing solutions that are not only technologically advanced but also user-friendly and accessible.

Our flagship products, Project Symbiote, Pathfinder and Crucial, are a testament to our innovative approach. Crucial, a game and UI development tool that uses Artificial Intelligence and Natural Language Processing to transform text descriptions into playable games or wonderful application frontends. With Crucial, we're democratizing game and interface development, making it accessible to anyone who can write a story or describe their applications interaction.

At Smallroom Technologies Inc., we're not just building software; we're building the future. We're a team of dreamers and doers, innovators and inventors, committed to creating technology that makes a difference. Join us as we explore the frontier of technological innovation and shape the future of the tech industry.

## Crucial Business Model

### Software as a Service (SaaS)

The core NLM AI models trained in NLP to game creation engine code creation would be housed in the cloud and a subscription model would be provided for interaction with the custom AI models.

- **Free Tier:** Access to the basic interface and the ability to create and share simple 2d games that can be generated by NLP story telling or game descriptors.
- **Basic Tier:** Access to essential features and the ability to create simple 2d/3d games to share.
- **Professional Tier:** Access to all features, increased game creation complexity and access to advanced features such as asset management for images and 3D models for creating your game.

### Data Packs and Add-ons

Game addons and data packs can be offered either through advanced subscription or a "Game Pack" store offering. Whereas packages that contain all the bootstrapping needed to create your new game can be provided. Want an FPS (first person shooter) with medieval player skins, and scifi laser weapons, well pack up your inventory in the store where you can purchase the basic FPS core and player / weapon skins and libraries and add them to your story. The price point can be anywhere from a couple dollars to \$25 depending on the complexity and the framework you pick.

### Plugin and Data Pack Contributors

With the pricing and product offering methods described we plan to also offer a place where people that have created game objects, skins and other components can share or even sell their creations. A user of Crucial comes up with a beautiful skin pack for his game and decides to place in in the store for a humble offering of \$2.99. Crucial can then work with the contributor and provide the store front to sell their skin pack. Leveraging a shared profit we can work well with in giving the contributor 70+% of the earnings of their package and leveraging a small share back into the company to maintain the infrastructure and grow.

## Pricing Structure

### Free Tier

Access to the basic 2D code generation models for fun game development for all. Create your games, share them and house them on the Crucial servers.

### Basic Tier

Access to essential features and the ability to create simple 2D/3D games. Comes with access to basic asset packs such as game types (First Person Shooters (FPS), Real Time Strategy (RTS), Horizontal Fighter, 2D side scroller, Flight Simulator, etc...). Also access to UI / UX creation tools and pre-created themes.

### Professional Tier

Access to all features, increased game creation complexity and access to advanced features such as asset management for images and 3D models for creating your game. All the features of the Free and Basic Tiers and access to higher quality gaming objects and the most advanced NLP AI to game code generation on the market.

## Operations and Management

Crucial's operations will be primarily focused on the ongoing development, maintenance, and support of the web-based platform and the game creation and storage environment. The company will require a team of skilled software developers, DevOps staff, customer support representatives and more. In addition, the company will need to establish a robust infrastructure for data storage, security, and growth.

### Crucial's Management Team Structure

#### **CEO (Chief Executive Officer):**

Responsible for the overall vision, strategy, and direction of the company. The CEO should have a strong background in software development, data analysis, and entrepreneurship, as well as a deep understanding of the target market and industry.

#### **CTO (Chief Technology Officer):**

Responsible for overseeing the technical aspects of the project, including software development, data integration, and infrastructure management. The CTO should have a strong background in software engineering, data analysis, and security, as well as experience in managing technical teams.

#### **CFO (Chief Finance Officer):**

Responsible for financial planning, budgeting, cash flow management, and financial reporting and accounting.

By having a diverse and experienced management team, Crucial can effectively address the various challenges that come with developing and marketing a software platform and service offering in a competitive industry.

### Crucial's Non-Management Structure

#### *Software Development Team:*

Responsible for developing and maintaining the web app, integrating various data sources, and implementing the AI component for data analysis.

- Game Developer(s): 2
- Machine Learning / Prompt Engineer(s): 2
- Frontend / Backend Developer(s): 2

- UX / UI Designer: 1

#### *Marketing / Sales Team:*

Responsible for developing and executing the marketing strategy, managing marketing campaigns, and driving user acquisition and retention. Focused on building and maintaining relationships with potential customers, closing deals, and driving revenue growth.

- Marketing / Sales Lead: 1
- Sales Representatives: 2

#### *Customer Support Team:*

Responsible for providing technical support, assisting clients in using the software, and addressing any issues they may encounter.

- Customer Support Representative(s): 2-3

Estimated Labor Costs for Crucial Management and Non-Management Teams

#### *Management Team (per-year)*

- CEO (Chief Executive Officer): 150,000–200,000
- CTO (Chief Technology Officer): 130,000–180,000
- COO (Chief Finance Officer): 120,000–170,000

**Total Management Team Cost:** \$400,000–\$550,000

#### *Non-Management Team (per-year)*

- Game Developer(s): 80,000–120,000 (x 2 = 210,000–270,000)
- Machine Learning / Prompt Engineers: 110,000–160,000 (x 2 = 220,000–320,000)
- Frontend / Backend Developers: 75,000–125,000 (x 2 = 150,000–250,000)
- UX / UI Designer: 70,000–100,000 (x 1 = 70,000–100,000)
- Marketing / Sales Lead: 70,000–120,000 (x 1 = 70,000–120,000)
- Customer Support Representative(s): 40,000–75,000 (x 3 = 120,000–180,000)
- Sales Representative(s): 50,000–70,000 (base salary) + commission (x 2 = 100,000–140,000 + commission)

**Total Non-Management Team Cost:** 1,090,000–1,380,000 (excluding sales commission)

**Combined Total Labor Cost:** 1,490,000–1,930,000 (excluding sales commission)

## Financial Projections

Crucial's revenue will primarily be generated through subscription fees for the web-based platform and game developer packs in the store. The company will offer tiered pricing plans based the features and development complexity of the NLM models. Additional revenue may be generated through the asset store.

The company anticipates achieving profitability within the first two years of operation, with a projected revenue of \$2.5 million in first year of sales, growing at a rate of 20% annually.

#### Software Development:

Hiring a team of experienced software developers is crucial. Depending on the complexity of the project, you might need between 3 to 5 developers, including a project manager, a backend developer, a frontend developer, an AI specialist, and a UX/UI designer. The cost can range from \$80,000 to \$120,000 per developer per year, so you're looking at around \$400,000 to \$600,000 per year for the development team.

#### Hardware and Software:

You'll need powerful computers and professional software development tools. This could cost around \$10,000 to \$20,000.

#### Office Space and Utilities:

Depending on your location, this could cost between \$10,000 and \$30,000 per year.

#### Marketing and Sales:

This includes website development, promotional materials, advertising, and possibly hiring a marketing and sales team. This could cost between \$50,000 and \$100,000 in the first year.

#### Legal and Accounting:

This includes legal fees for setting up the company, patenting your product, and ensuring you're compliant with all regulations, as well as accounting and bookkeeping services. This could cost between \$10,000 and \$20,000 in the first year.

#### Miscellaneous Expenses:

This includes everything else, like insurance, travel, training, and unforeseen expenses. This could cost between \$10,000 and \$20,000 in the first year.

To create, support and maintain this offering we are looking at rough estimate of between \$490,000 and \$790,000 for the first year of product development. Please note that these are very rough estimates and the actual costs could be higher or lower.

#### 5 Year Forecast

Please note this forecast does not take into account the product development cycle. The product development forecast is ~1 year and requires an initial funding of \$2.5 million in capital.

#### Year 1:

Sales revenue (8000 customers): \$20,000,000

Salaries and wages (management and non-management): \$1,930,000

Marketing expenses: \$50,000

Office rent and utilities: \$30,000

Software and tools subscriptions: \$20,000

Insurance and licenses: \$10,000

Miscellaneous expenses: \$10,000

Operational Costs (20% of revenue): \$4,000,000

**Total Expenses: \$6,050,000**

**Net Income: \$13,950,000 (profit)**



*Year 2:*

Sales revenue (20% growth): \$24,000,000

Salaries and wages (management and non-management): \$2,073,000

Marketing expenses: \$70,000

Office rent and utilities: \$30,000

Software and tools subscriptions: \$20,000

Insurance and licenses: \$10,000

Miscellaneous expenses: \$10,000

Operational Costs (20% of revenue): \$4,800,000

**Total Expenses: \$7,013,000**

**Net Income: \$16,987,000 (profit)**

*Year 3:*

Sales revenue (20% growth): \$28,800,000

Salaries and wages (management and non-management): \$2,228,230

Marketing expenses: \$100,000

Office rent and utilities: \$30,000

Software and tools subscriptions: \$20,000

Insurance and licenses: \$10,000

Miscellaneous expenses: \$10,000

Operational Costs (20% of revenue): \$5,760,000

**Total Expenses: \$8,158,230**

**Net Income: \$20,641,770 (profit)**

*Year 4:*

Sales revenue (20% growth): \$34,560,000

Salaries and wages (management and non-management): \$2,405,847

Marketing expenses: \$130,000

Office rent and utilities: \$30,000

Software and tools subscriptions: \$20,000

Insurance and licenses: \$10,000

Miscellaneous expenses: \$10,000

Operational Costs (20% of revenue): \$6,912,000

**Total Expenses: \$9,517,847**

**Net Income: \$25,042,153 (profit)**

#### *Year 5:*

Sales revenue (20% growth): \$41,472,000

Salaries and wages (management and non-management): \$2,607,289

Marketing expenses: \$160,000

Office rent and utilities: \$30,000

Software and tools subscriptions: \$20,000

Insurance and licenses: \$10,000

Miscellaneous expenses: \$10,000

Operational Costs (20% of revenue): \$8,294,400

**Total Expenses: \$11,131,689**

**Net Income: \$30,340,311 (profit)**

Note that these projections are based on the assumption that the revenue will grow by 20% each year and that the distribution across the pricing tiers remains equal. Actual results may vary depending on factors such as market conditions, customer acquisition strategies, and the effectiveness of the Crucial platform.

## Cost Reduction

### *Office Space:*

The potential of purchasing a home to be used for office space cuts the average cost of office space down by ~50%. A home loan of ~\$400,000 at a fixed interest of 2% would result in a cost of \$1,478 a month. Homes in Florida have an average increase in equity of ~11% a year. Providing ~\$44,000 in equity each year. This provides a potential revenue of ~\$26,264 a year resulting in 0 cost to office space.

### *Labor:*

#### *Stock Reward Programs:*

Leveraging the companies' stocks to reduce labor costs can equate to a 10-40% decrease in labor overhead. By offering a generous stock incentive plan we can reduce the overhead while still obtaining premium skilled individuals. The current estimate of ~\$2,000,000 in labor can be reduced to ~1,200,000 given the right incentives.

#### *Outsourcing:*

By outsourcing specific tasks, we can see a cost reduction of up to 60% in some of our development requirements. Due to the nature of the company, it is preferred to keep the knowledge set in house. By targeting specific non-IP related tasks like website development, and components of the front end we reduce our total labor costs by another 10-20%.

## Milestones

- Secure initial funding for the development and launch of the Crucial platform.
- Assemble a skilled development team and begin platform development.
- Conduct further market research to refine product features and target customer segments.
- Complete development and testing of the Crucial platform.
- Launch a closed beta for select users to gather feedback and further refine the platform.
- Officially launch the Crucial Game Development platform and initiate marketing efforts.
- Continuously monitor user feedback and platform performance to inform future updates and improvements.

- Establish partnerships with key industry players and influencers to increase brand awareness and credibility.
- Achieve key financial milestones, including reaching profitability within two years and achieving a 20% annual growth rate in revenue and user base.
- Explore potential expansion into new markets and the development of additional features and services based on customer needs and feedback.

## Risk Assessment

### Exit Strategy

Crucial's exit strategy will depend on the company's growth and performance. Potential exit options include:

- Acquisition: Crucial Game Development Platform may be acquired by a larger company in the private investigation, digital bounty hunting, or legal services industries looking to expand its product offering and market reach.
- Merger: Crucial may merge with a complementary company to combine resources and expand its market presence.
- Initial Public Offering (IPO): Crucial may go public, offering shares to the public and listing on a stock exchange, if the company achieves significant growth and profitability.
- Management Buyout (MBO): The company's management team may purchase the outstanding shares from the investors, effectively taking ownership of the business.

Ultimately, the choice of an exit strategy will depend on the company's performance, market conditions, and the preferences of its investors and founders.

## Crucial Game / UI Development Features

### AI-Powered Game Development:

Crucial leverages advanced AI and Natural Language Processing (NLP) technologies to transform text descriptions into playable games. This allows users to create games simply by writing a story.

### No Coding Skills Required:

The platform is designed to be user-friendly and does not require any coding skills. This makes it accessible to a wide range of users, including independent game developers, educators, storytellers, and creative individuals.

### Integration with Popular Game Engines:

Crucial works in direct support with popular game development engines, providing NLP models that can translate stories or descriptive game details into a playable game.

### Customizable Features:

Users can customize various aspects of their games, including characters, environments, and gameplay mechanics, to create a unique gaming experience.

### Collaborative Platform:

Crucial allows multiple users to collaborate on a single project, making it easier to work as a team and share ideas.

### Real-Time Updates:

Changes made in the platform are reflected in real-time, allowing users to see their game evolve as they work on it.

### Cross-Platform Compatibility:

Games created on Crucial can be exported and played on various platforms, including PC, console, and mobile devices.

### Community Support:

Crucial offers a community platform where users can share their creations, get feedback, and learn from each other.

### Educational Resources:

The platform provides tutorials and resources to help users learn more about game development and improve their skills.

### Secure and Reliable:

Crucial is built with security in mind, ensuring that users' data and creations are protected. The platform is also reliable, with high uptime and performance.

### Scalable:

Crucial can handle projects of any size, from small indie games to large, complex projects.

### Open Source and Freemium Model:

Crucial offers a basic version of its software for free, with premium features available for a fee. This allows users to try the platform and see its potential before committing to a paid plan.

### UI/UX Interface Development:

Crucial provides tools and features that allow users to design and develop intuitive and visually appealing user interfaces for their games or applications. This includes a drag-and-drop interface, pre-designed UI components, and the ability to customize every aspect of the interface.

### Integration with UI Frameworks:

Crucial supports integration with popular UI frameworks, allowing users to leverage these tools to create sophisticated interfaces. This includes frameworks like React, Angular, Vue.js, and more.

### Game Engine-Powered Frontends:

With Crucial, users can leverage the power of game engines to create dynamic and interactive application frontends. This can result in more engaging and immersive user experiences.

### Responsive Design:

Crucial supports responsive design, ensuring that interfaces look and function well on a variety of screen sizes and devices.

### Interactive Prototyping:

Users can create interactive prototypes of their interfaces, allowing them to test and refine their designs before moving to development.

### User Testing and Feedback:

Crucial provides tools for user testing and collecting feedback, helping users to continuously improve their interfaces based on user input.

### Version Control:

Crucial includes built-in version control, allowing users to track changes, revert to previous versions, and collaborate more effectively.

### Accessibility Features:

Crucial includes features to help ensure that interfaces are accessible to all users, including those with disabilities. This includes support for accessibility standards and guidelines, as well as tools for testing accessibility.

### Performance Optimization:

Crucial provides tools and features to help optimize the performance of interfaces, ensuring smooth and responsive user experiences.

### Animation and Transition Tools:

Crucial includes tools for creating animations and transitions, adding a layer of polish and professionalism to interfaces.

### Crucial Store/Library:

Crucial includes a comprehensive store/library where users can access a wide range of assets and resources for their game or UI development.

### Game/UI Assets:

The store offers a variety of game and UI assets, including character models, environments, textures, sounds, and more. These assets can be used to enhance the visual appeal and functionality of games or applications.

### Gaming/UI Frameworks:

Crucial provides pre-built gaming and UI frameworks for various game types, including First-Person Shooter (FPS), Real-Time Strategy (RTS), side scroller, and more. These frameworks provide a solid foundation for game development, saving users time and effort.

### UI/Game Templates:

The store also offers a selection of UI and game templates that users can use as a starting point for their projects. These templates include pre-designed interfaces and game mechanics, which can be customized to suit the user's needs.

### Community Contributions:

Crucial allows users to contribute their own assets, frameworks, and templates to the store. This fosters a collaborative community and provides users with a wider range of resources.

### Quality Control:

All assets, frameworks, and templates in the Crucial store are vetted for quality, ensuring that users have access to reliable and high-quality resources.

### Easy Integration:

Resources from the Crucial store can be easily integrated into projects within the Crucial platform, providing a seamless development experience.

### Regular Updates:

The Crucial store is regularly updated with new assets, frameworks, and templates, ensuring that users always have access to the latest resources.

## Market Analysis and Strategy

### Market Opportunity

The global game development and UI / UX frontend software market is expected to grow significantly over the next few years. According to a report by Grand View Research, the global game development software market size was valued at USD 238.5 million in 2023 and is expected to expand at a compound annual growth rate (CAGR) of 4.5% from 2021 to 2028. This growth is driven by the increasing popularity of video games across all age groups and the rise of independent game developers.

### Target Market

Our target market includes independent game developers, application designers, educators, storytellers, and creative individuals who are interested in creating their own video games or application frontends but lack the technical skills required for traditional development. This is a large and growing market, as more and more people are becoming interested in the ability to use game engines to power the most creative applications on the market.

### Competitive Landscape

The game development and application frontend software market is competitive, with several established players offering a range of solutions. These include Unity Technologies, Epic Games (Unreal Engine), and YoYo Games (GameMaker). These platforms offer powerful game development tools, but they require a certain level of technical skill to use effectively.

Our product differentiates itself by offering a unique solution that requires no coding skills. By leveraging AI and NLP, our software allows users to create games simply by writing a story. This is a unique selling proposition that sets us apart from our competitors. Instead of direct competition with game development engines we work in direct support. Providing NLP models that can translate stories or descriptive games details into a playable game leveraging the most popular development engines to date.

#### Potential Competitors

There are currently no known competitors in this method of game development. Existing NLM AI engines can provide description (NLP) to code output but not with consistency or application specific plugins for making the games more content rich.

#### Marketing Strategy

##### Market Needs

There is a clear need in the market for a user-friendly game development tool that does not require technical skills. Many potential game creators are deterred by the complexity of traditional game development tools. Our product fills this gap in the market, offering a solution that is accessible to anyone who can write a story.

##### Market Trends

The use of AI in game development is a growing trend in the industry. AI is being used to create more realistic and immersive gaming experiences. Our product is at the forefront of this trend, using AI to transform text descriptions into playable games.

In conclusion, our market analysis indicates that there is a significant opportunity for our product. The market for game development software is growing, and there is a clear need for a user-friendly solution that does not require technical skills. Our unique approach to game development, leveraging AI and NLP, sets us apart from our competitors and positions us to capture a significant share of this growing market.

##### Market Strategy

Our marketing strategy will focus on creating awareness, generating interest, and driving adoption of our game development software. We will leverage both online and offline channels to reach our target audience. Here's a detailed plan:

##### *Product Launch:*

We will organize a product launch event to introduce our software to the market. This event will be attended by industry influencers, potential customers, and media representatives. We will also live stream the event to reach a wider audience.

##### *Website and SEO:*

We will create a professional website that provides detailed information about our software, its features, and its benefits. The website will also include tutorials, case studies, and customer testimonials. We will optimize our website for search engines to increase its visibility.

##### *Content Marketing:*

We will create high-quality content that educates our target audience about game development and the benefits of our software. This content will be distributed through our blog, social media channels, and email newsletters.

##### *Social Media Marketing:*

We will use social media platforms to engage with our audience, share our content, and promote our software. We will focus on platforms that are popular with our target audience, such as Twitter, Reddit, and LinkedIn.

#### *Influencer Marketing:*

We will partner with influencers in the gaming and tech industry to promote our software. These influencers will create content about our software and share it with their followers.

#### *Partnerships:*

We will form partnerships with schools, colleges, and coding bootcamps to introduce our software to students. We will also partner with game development studios and indie developers to showcase our software in action.

#### *Open Source and Freemium Model:*

We want to work closely with the open source community to generate new ideas and concepts for the developer community also. Basic features and capabilities can be offered in a light weight open source package to get developers' teeth sunk into the overall package. To encourage adoption and community contribution, we will open source a basic version of our software. This will provide the basic features and building blocks for other developers to contribute to and build upon. We will also offer a freemium model for our more advanced, proprietary version of the software. Users can use the basic features for free and pay for advanced features. This approach will allow us to build a community around our software, improve our product with the help of the community, and also generate revenue from premium features.

#### *Customer Support and Community Building:*

We will provide excellent customer support to assist users with any issues they may encounter. We will also build a community of users who can help each other and share their creations.

## Marketing Objective

Define clear and measurable marketing objectives for 'Crucial', such as increasing brand awareness, generating leads, and acquiring a specific number of customers within a given timeframe.

## Target Audience

- Educators / Teachers
- Game Developers
- Students
- Entrepreneurs
- UI / UX designers

## Unique Selling Proposition (USP)

Crucial offers a comprehensive digital game development platform that combines the use of AI NLM models capable of generating premium production ready games for the public. The platform is specifically designed to cater to the unique needs of professionals in the game development, UI / UX development and any professionals in need of graphically stunning application creation. By leveraging AI-powered algorithms and the most popular game development engines, Crucial continuously improves its library of natural language descriptive game development capabilities on a daily basis.

## Marketing Channels and Tactics

### Content Marketing

- Create valuable and informative blog posts, whitepapers, and case studies related to OSINT, digital investigations, and the legal industry.
- Share content on relevant social media platforms and industry forums.
- Collaborate with industry influencers and experts for guest posts and interviews.



### Search Engine Optimization (SEO)

- Optimize website content and structure for target keywords related to your niche.
- Build high-quality backlinks through content marketing, guest posting, and strategic partnerships.
- Monitor and improve website performance, including loading speed and mobile-friendliness.

### Social Media Marketing

- Establish a presence on relevant social media platforms, such as LinkedIn, Twitter, and Facebook.
- Share valuable content, engage with your audience, and participate in industry-related discussions.
- Run targeted ad campaigns to reach potential customers and generate leads.

### Email Marketing

- Build an email list of potential clients and interested parties through content marketing and lead magnets.
- Develop targeted email campaigns to nurture leads, share valuable insights, and promote 'Crucial'.
- Track email performance metrics and optimize campaigns based on results.

### Public Relations (PR)

- Develop relationships with industry publications, journalists, and influencers.
- Share press releases and pitch story ideas to gain media coverage for 'Crucial' and company news.
- Participate in industry events and conferences to network with potential clients and partners.

### Online Advertising

- Utilize pay-per-click (PPC) advertising on platforms like Google Ads and LinkedIn Ads to reach potential customers.
- Retarget website visitors with display ads to keep your brand top of mind.
- Test and optimize ad campaigns based on performance metrics.

### Budget and Resources

Allocate a budget for each marketing channel and tactic, based on expected return on investment (ROI) and available resources.

### Performance Metrics and KPIs

Define key performance indicators (KPIs) to track and measure the success of your marketing efforts, such as:

- Website traffic and user engagement
- Search engine rankings
- Social media followers and engagement
- Email open and click-through rates
- Leads generated
- Conversion rates
- Cost per lead and cost per acquisition

### Review and Optimization

Regularly review your marketing performance, comparing actual results to your objectives and KPIs. Adjust your strategies and tactics as needed to optimize your marketing plan and achieve your goals.

## Capital Management and Investment

With Crucial there are several ways to invest unused capital to create further revenue. The choice depends on the company's financial goals, risk tolerance, and investment horizon. Some options include:

### Reinvesting in the business:

Expand the company's operations, develop new products or services, improve infrastructure, upgrade technology, or increase marketing efforts. Reinvesting in the business can lead to long-term growth and increased profitability.

### Mergers and acquisitions:

Acquire or merge with other businesses to expand the company's market share, diversify product offerings, or gain access to new markets. This can help the company grow and increase its revenue potential.

### Stock buybacks:

Repurchase the company's own shares to reduce the number of outstanding shares, which can increase earnings per share and potentially boost the stock price. This can benefit the company's shareholders and potentially attract new investors.

### Paying down debt:

Use the excess capital to reduce outstanding debt, which can lower interest expenses, improve the company's credit rating, and create a healthier balance sheet.

### Investing in financial instruments:

Invest the excess capital in low-risk financial instruments, such as government bonds, corporate bonds, or high-yield savings accounts, to generate a steady stream of interest income.

### Investing in marketable securities:

Allocate some capital to stocks, mutual funds, or exchange-traded funds (ETFs) to potentially generate higher returns. This option carries more risk but may provide higher returns compared to fixed-income investments.

### Establishing a reserve fund:

Set aside a portion of the unused capital in a reserve fund to cover unexpected expenses, emergencies, or future investment opportunities. This ensures the company has a financial cushion to rely on when needed.

### Employee training and development:

Invest in employee training and development programs to improve employee skills, productivity, and morale. A well-trained and motivated workforce can contribute to the company's long-term growth and success.

### Corporate social responsibility initiatives:

Allocate funds to support social, environmental, or community initiatives, which can enhance the company's reputation, attract positive media coverage, and strengthen relationships with stakeholders.

### Real estate investment:

Invest in commercial or residential real estate properties, either directly or through real estate investment trusts (REITs). Real estate can generate rental income, tax benefits, and potential appreciation over time, diversifying the company's investment portfolio and potentially providing a steady stream of revenue.

## Funding Requirements

To successfully develop, launch, and grow the Crucial platform, the company requires a significant investment to cover initial setup costs, ongoing operational expenses, and any contingencies that may arise. The funding requirement represents the cost for the first two years of business. Based on the previous financial projections, Crucial's funding requirements are as follows:

**Total Funding Required:** \$2,500,000

It is important to note that these funding requirements are estimates and may change as the business develops and grows. Crucial will need to secure this funding through a combination of equity financing, debt financing, or other fundraising methods, such as crowdfunding or grants.

By securing the necessary funding, Crucial will be better positioned to develop and launch its innovative software platform, hire a talented team, and implement effective marketing strategies to achieve its business objectives and establish itself as a leader in the game / UI development industry.

## Platform Infrastructure

Network Infrastructure:

The network will be broken up into 4 subnets. Each subnet with their respective security policy.

Public subnet

The public subnet will house externally facing services such as load balancers.

Frontend subnet

The frontend subnet will house services that will be exposed to the public facing Internet via the public subnet load balancers. Services such as API exposure, web services and web UIs.

Backend subnet

The backend subnet will house all core functions to Crucial. All frontend systems will use the services on this subnet for CRUD exposures. Systems such as internal load balancers and backend servers.

Data and Services subnet

All shared storage, database servers, AI services and other supporting components of the systems within the backend subnet will be housed here.

Systems Infrastructure:

The systems infrastructure will be a clustered environment of Linux hosts used to serve and manage all Crucial functionality.

Frontend Platform

An array of hosts serving as a Kubernetes or Docker Swarm cluster.

Backend Platform

For performance and stability these may be standalone hosts that are clustered for heavy processing loads.

Data Platform

AI model services, NFS shared storage

Security

Security requirements for account access, SSO, 2FA, purchase details, etc...

# Specifications

## Descriptive Use Case

An example of using Crucial is as follows. The ability to use natural language processing to create games based off a story or other text description. At the core would be an AI model trained in a particular 3D rendering engine such as opengl, unity, unreal engine etc... Descriptive text such as nouns, adjectives, adverbs, etc. would be mapped to specific object creation methods.

For example:

```
---
prompt: I want to create a maze game that has a player named Jackie. Jackie starts at the beginning of the maze and the arrow keys are used to move the player through the maze. At random points Jackie will hit an obstacle whereas the maze dims to the background and a small riddle needs to be solved to continue. Upon each riddle solved and step moved forward points are accumulated. After passing one maze a new one is created more difficult than the last. The player "Jackie" must see how many levels they can traverse and accumulate the highest point score. Failure of 5 riddles results in game over.
---
```

The AI model would then take into account all the descriptions and generate the JSON configuration for the user and the creation of the game / UI. An example of natural language mapping to game / UI objects would be as follows.

```
---
create maze game = <code required to generate the maze graphically>
player name Jackie = <code required to create a player object in the game named Jackie by default>
starts at beginning of maze = <code required to place the player at the beginning of the maze>
arrow keys to move = <code required to set the arrow keys to move the player up, down, left right through the maze>
random points obstacle = <code required to create virtual obstacles hit at random intervals at random points in the maze>
maze dims and small riddle = <code required to dim the maze when an obstacle is hit and provides a riddle that must be answered multiple choice>
riddle solved = <code required to give the play points and move on>
passing one maze a new one is created more difficult = <code required to register that the maze has been completed and a new more difficult maze should be generated>
failure of 5 riddles = <code required to reset the game and say game over if 5 riddle failures happen>
---
```

Objects such as nouns, pronouns like Bob, human, alien, dog etc... would map to functions for generating the most common noun objects. eg: human, dog, cat, circle, square, polygon, triangle, fish etc...

Objects such as adjectives describing nouns would be used to give further feature to the noun objects. eg: blue human, square dog, tall alien, etc...

Objects such as verbs describing the nouns actions would be used to give further direction to the noun objects. eg: blue human moves up, square dog sits down, tall alien blasts a hole, etc...

The AI model would provide a JSON document configuring all the objects described with their attributes. For example the following would be generated if I requested that a green square be created at a specific position.

```
---
{
  "action": "create",
  "object_name": "important_square",
  "object_type": "square",
  "object_attributes": {
    "object_text": "a square",
    "object_text_color": "red",
    "object_rotation": {
      "x": 0,
      "y": 0,
      "z": 0
    },
    "object_scale": {
      "x": 1,
      "y": 1,
      "z": 1
    },
    "object_physics": {
      "mass": 1,
      "friction": 0.5
    },
    "object_visibility": true,
    "object_lighting": {
      "light_type": "directional",
      "light_color": [1, 1, 1, 1],
      "light_direction": [0, -60, 0]
    }
  }
}
```

```

    },
    "object_control": true,
    "object_color": "green",
    "object_size": 100,
    "object_state": "moveable",
    "object_init": [ 500, 500 ],
    "object_action": "touch",
    "object_reaction": "explode"
  }
}
---
```

By creating a pseudo-language for object creation and manipulation we can create an intermediate application to the most popular game and UI development engines on the market. The application is the control point of translating the JSON object definitions into actual code. This abstraction provides numerous methods to source object injection into the engine of your choice. The NLM AI model is trained to take natural language and descriptions and extract the objects from the story or description given. Using the languages components such as nouns, adjectives, verbs, etc. we create the object definitions needed and translated to a JSON document. The intermediate application would receive the output directly from the AI model created and you would then have a method to take natural language and create games or UIs just by describing them. Every time you write something new there is a potential for it to be translated into your game / environment rendering, ready to be interacted with. The potential goes even further. The documents generated create an ongoing library of objects that can be created, read, updated and deleted. The more the tool is used and the more descriptive your “story” the richer the rendering becomes. As the AI model is used more and prompted properly it will begin to understand the direct relation between things such as names (pronouns) and the object document they are related to. Given time and effort even a personality to an object would become possible. Attaching AI interaction directly to an object can open the doors for an interactive experience that would blow the mind.

To further the experience, an exposure to an object modification tool would allow for the linking of skins, sounds and other animations that can be attached to the objects document. Libraries of game types, UI components and other assets can easily be loaded in before you begin your story.

## Notes

Crucial: A method for rendering dynamic user interfaces off of language input. Using game rendering engines that can be interfaced with an AI model that can display images based off the user input. An example would be the use of natural language to create your own custom web browser or game.

This is a complex task that involves several components. Here's a high-level approach to accomplish this:

- **Interpretation of User Input:**  
We need to create a parser that can understand the user's input and translate it into a series of actions. This parser should be able to understand the different components (like square, circle, button), their properties (like position, size, color), and actions (like rotate, reset). This could be done using a Natural Language Processing (NLP) model or a rule-based system.
- **Rendering with Game Engines:**  
Once we have the actions, we need to translate them into object documents. This involves creating a mapping between the actions and the corresponding game engine functions. For example, creating a square could be mapped to the a function that can render what was asked for via NLM models.
- **Dynamic Rendering:**  
The rendering should be dynamic, meaning that it should be able to update the display based on the user's input. This could be achieved by running a loop that constantly checks for new actions and updates the display accordingly.

- **Interaction with Buttons:**  
The buttons should be interactive, meaning that they should perform certain actions when clicked. This could be achieved by checking for mouse events in the game engines loop and calling the corresponding functions when a button is clicked.
- **Integration with NLM Model:**  
The NLM model should be integrated into this system to provide responses to the user's input. This could be done by feeding the user's input to the model and using the output to update the display.
- **Error Handling:**  
The system should be able to handle errors gracefully. For example, if the user asks to create a shape that the system doesn't recognize, it should provide a helpful error message instead of crashing.

This is a high-level approach and the actual implementation might vary based on the specific requirements and constraints of the project.