

# Milestone 1: Formal Game Proposal

## Game Description

**Game Title:** *Giant Robots*

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### 1. Introduction

*Giant Robots* is an immersive, narrative-driven strategy game set on a dystopian version of Mars, reimagined as a prison planet where inmates from across the earth are confined. The game centers on the player's mission to secure a ticket back to Earth. To achieve this, players must navigate a series of intense combat matches, where they pilot a robot and strategically fight NPC-controlled bots, each guided by the personality and strategies of a historical figure. However, the arena is only half of the battle. During the daytime, players will explore their surroundings, converse with fellow prisoners, gather critical intel on upcoming opponents, and make moral decisions that impact their karmic standing, directly influencing interactions, prices, and even the nature of future combat encounters.

The theme, "Chain Reaction," is woven deeply into both the mechanics and the narrative. Each choice, interaction, and strategy impacts subsequent events in a chain that defines the player's journey, challenges, and ultimately, their success.

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### 2. Story and Setting

Mars is a maximum-security prison planet where inmates are brought without memory of how they arrived. The only way back to Earth is to win a certain number of high-stakes matches in the arena, with each victory moving the player closer to freedom.

During the day, players steer their customizable robot through prison habitats, communicating with NPCs and gathering intel. These NPCs, like the opponents, are also modeled after historical figures, each with a unique personality, backstory, and motivations. For instance, NPCs might embody figures such as Napoleon, Cleopatra, or Einstein, each offering hints, intel, or strategies that relate to their historical persona. The player can interact with these figures to gain insights into upcoming battles or learn weaknesses in specific strategies.

### 3. Gameplay Overview

The game is divided into two primary gameplay loops:

- **Daytime Exploration:** During the day, players walk through prison habitats and interact with NPCs. Here, the player's goal is to gather useful information, understand the preferences of their opponents, and build alliances that may be beneficial in

future matches. This exploration is driven by the karmic system, which impacts the availability and quality of information. Players with positive karma may be able to purchase upgrades at a lower cost or receive additional insights, while those with negative karma might find information costly or less reliable.

- **Nighttime Combat:** Each night, players enter a VR-based combat arena where they face off against an NPC-controlled robot. The combat system is a dynamic twist on the classic “rock-paper-scissors” mechanic, using VR hand tracking to select one of five weapon choices, each of which counters another. To succeed, players need to adapt their strategy, observe the tendencies of each opponent, and outsmart them in a timed, high-stakes match.

## 4. Core Gameplay Mechanics

### Karma and Chain Reaction

A key element of *Giant Robots* is the karma system, which encapsulates the theme of “Chain Reaction.” Every interaction the player has with NPCs affects their karma, influencing how NPCs respond, how much upgrades cost, and even what kind of information is available. Positive karma may encourage other prisoners to be more helpful, while negative karma can make allies wary or even hostile. This cascading effect on gameplay decisions simulates a complex web of reactions that add depth to each encounter, conversation, and strategy.

### Combat System: 5-Way Rock-Paper-Scissors

The combat system builds on a unique variant of rock-paper-scissors, where players choose from five weapons that interact in a cycle of strengths and weaknesses. Combat is played out in rounds, and each round gives players a limited time to choose their weapon. If both players choose the same weapon (e.g., rockets), both incur damage, adding an element of unpredictability.

The complexity increases as players advance, with time limits decreasing and opponents becoming more challenging. Each opponent also has a distinct playstyle—some may prefer certain weapons more frequently, while others adapt based on the player’s tendencies. This requires players to be observant, adaptable, and strategic, drawing on the information gathered during daytime interactions.

### Historical Personality Simulation

Every NPC opponent is a historical figure, whose personality affects both daytime interactions and nighttime combat strategies. For example, “Napoleon” might adopt an aggressive, “rock-heavy” playstyle, preferring straightforward strength, while “Cleopatra” may favor unpredictable tactics. The conversations, where players gather intel or form alliances, are informed by each character’s background, making the dialogue feel authentic and engaging.

### VR Interaction and Quest Hand Tracking

The game utilizes Meta Quest 3's VR hand-tracking capabilities to enable natural, intuitive player interactions. Players make strategic choices in real-time by physically gesturing their

chosen weapon, which enhances immersion and makes the strategy component more engaging. The Quest's VR technology also plays a crucial role in tracking the player's interaction with NPCs and their environment.

### **Progression and Customization**

As players progress, they earn rewards and currency, which can be spent on upgrading the robot's weapons or defensive capabilities. The price and availability of upgrades are influenced by the karma system, creating a further link to the chain reaction theme. With positive karma, prices may be lower, while negative karma might inflate them. Customization offers strategic depth, as players tailor their robot to their preferred combat style and potentially gain advantages in specific matchups.

## **5. Design Justifications and Theme Integration**

The theme "Chain Reaction" affects the entire game design, from interactions with NPCs to combat mechanics. Each decision in one part of the game has effects across other aspects, forcing players to think about the long-term effects of their choices. Here's how design decisions align with the theme:

- **Karma-Driven Interactions:** The karma system ensures that every conversation influences future gameplay. It underscores a chain reaction effect, where a single interaction could tip the balance of a future match or alter an NPC's behavior. This mechanic gives depth to player choices and reinforces the theme by making players conscious of the potential ripple effects of their actions.
- **Adaptive Combat System:** Combat is designed to be more than a reflex-based activity; players must adapt to each historical character's strategies, introducing a chain of reaction-based decisions. The rock-paper-scissors mechanic coupled with shrinking time limits reflects the concept of cumulative consequences—the player's choices build up over each round, forcing strategic adjustments.
- **Information Gathering and Strategic Play:** The design of daytime exploration encourages players to think about how each interaction might benefit or disadvantage them later. This information-gathering phase is key to navigating the game's layered challenges, as players must adapt based on the preferences of opponents and the varying reliability of NPC allies. This ties into the chain reaction theme, where each piece of knowledge contributes to the cumulative effects in nighttime combat.

## **6. Background and Storyline**

The Player put on the forbidden Quest device and is now teleported to Mars where he has to fight for his freedom

## **7. Planned Tools, Algorithms, and Technologies**

Implementing *Giant Robots* will require a blend of VR-specific tools and strategic algorithms. The following components are planned:

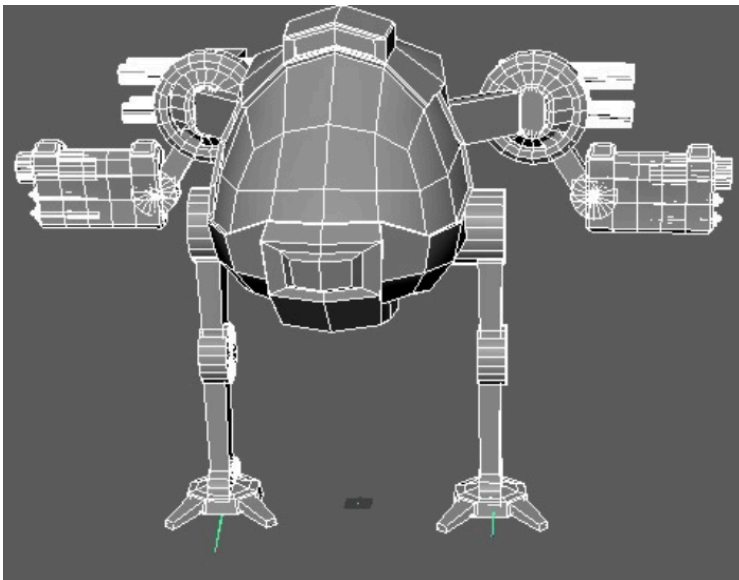
- **Quest Hand Tracking and VR Integration:** Essential for the combat mechanics, allowing players to gesture weapon choices intuitively.

- **Dialogue and Karma System:** Built with clever built LLM prompts, this system will track karma points, dynamically influencing conversation responses and prices.
- **Combat AI:** NPCs will utilize different algorithms to model their historical personas, with some NPCs using random choice distributions, others favoring weighted choices (e.g., 40-15-15-15), and some adapting based on previous player behavior.
- **Analytics and Chain Reaction Visualization:** After each match, players will see a summary of their choices and outcomes in the form of a “reaction chain” in a stats screen. This will visualize how each decision led to cumulative effects.

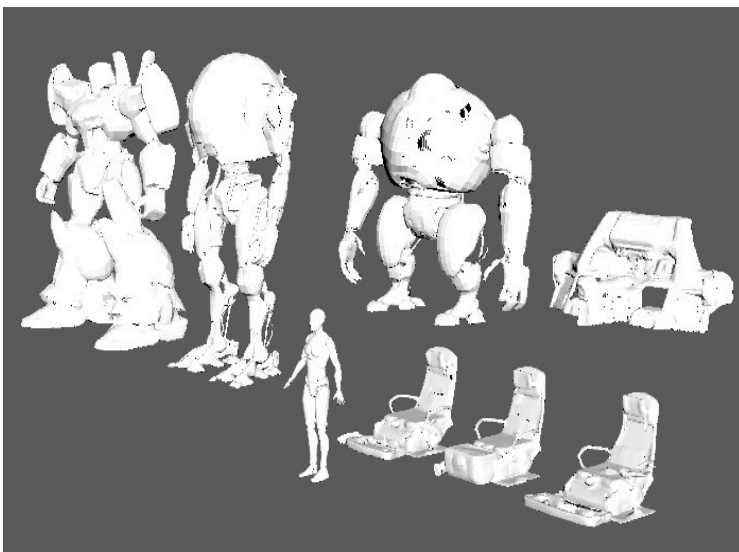
## 8. Genre and Target Audience

*Giant Robots* is a mix of VR strategy, LLM-narrative adventure, and combat, designed for players who enjoy strategy games. The game appeals to players looking for immersive VR experiences that combine complex decision-making with action.

## 9. Screenshots, Illustrations, Pictures, and Sketches

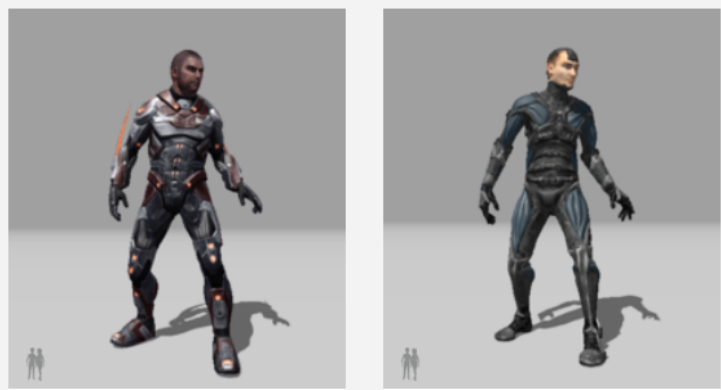


Giant Robot in "T" animation position. This model was created in Autodesk Maya and is designed to use the unity "umanoid animation" style. We have several variations.



More fight robots we created With Autodesk's Maya

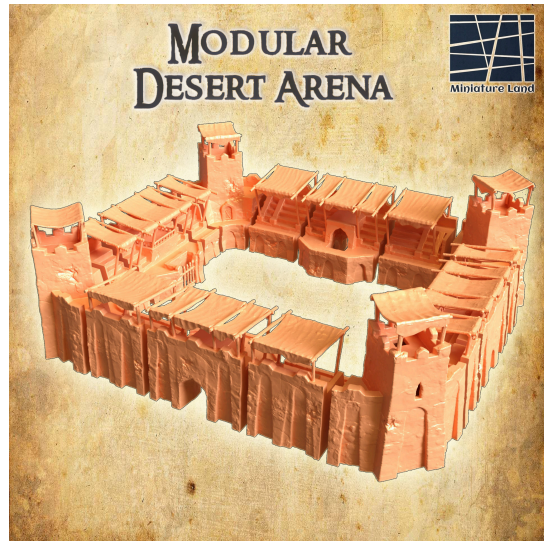




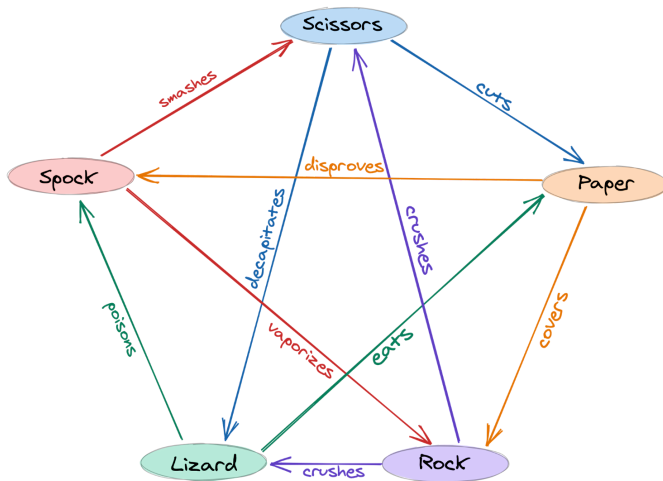
Examples of NPC characters (from Mixamo)





















Some of the historical characters simulated in our game. Note that in the game they will not have period costumes because they are simulations.



Arena example here the fighting will take place at night and during the day all characters wander around compared to Prison Yard.



Example 5-way rules for our combat system from [Uri](#) -> we will come up with our own elements for the attacks

You	Opponent
Win 	Lost 
Draw 	Draw 
Lost 	Win 
Draw 	Draw 
Lost 	Win 
Win 	Lost 
Lost 	Win 
Win 	Lost 
Draw 	Draw 

Example of a 9-Link fight chain where at the end its a draw (3-3)

## 10. Technical Achievement

For the technical achievement in our game, we aim to integrate several advanced elements:

### Core Achievement:

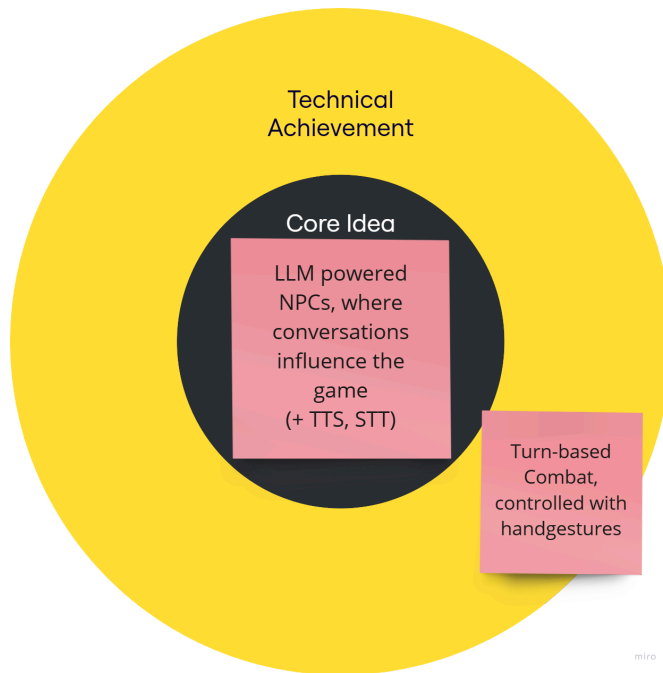
- **NPC Interaction powered by an LLM:** Through prompt engineering, we'll create dynamic and responsive NPC dialogues, making interactions more immersive and tailored.

### Additional Technical Features:

- **Meta Quest 3 Compatibility:** We will develop the game for Meta Quest 3, leveraging VR capabilities to enhance immersion.

- **Hand Gesture-Based Combat:** We'll implement hand gesture recognition for intuitive combat mechanics.
- **Voice-to-Text and Text-to-Voice Controls:** Players can use voice commands and receive audio feedback, creating a hands-free, accessible experience.
- **AI-Driven Historical Characters:** Simulated historical characters will interact with players in realistic, context-driven ways.
- **Combat System:** A simple 3-5 choice combat system, will add strategy and variety to gameplay.

## 11. "Big Idea" Bullseye



### **Core Idea:**

Focus: Core mechanic featuring "LLM powered NPCs, where conversations influence the game," highlighting the importance of dynamic interactions.

Features: Supports Text-to-Speech (TTS) and Speech-to-Text (STT) technologies to enhance communication with NPCs.

### **Technical Achievement:**

Features: Implementation of "Turn-based Combat controlled with hand gestures," adding a layer of interactive gameplay by integrating physical movements.

## 12. Development Schedule

### **Functional minimum**

At the very minimum we would like to see turn-based combat working. Basic interaction with the LLM driven characters should all be working. Karmascore based on the conversations should be working.

### Low target

The same as the functional minimum, plus all of the interaction should be done with Voice to text and text to Voice, and there should be a very nice hands only interface inside the robot.

### Desirable target

We would like to have a substantial part of the game outside of the robots. Aside from the Arena we need a place to improve weapons and interact with other prisoners.

### High target

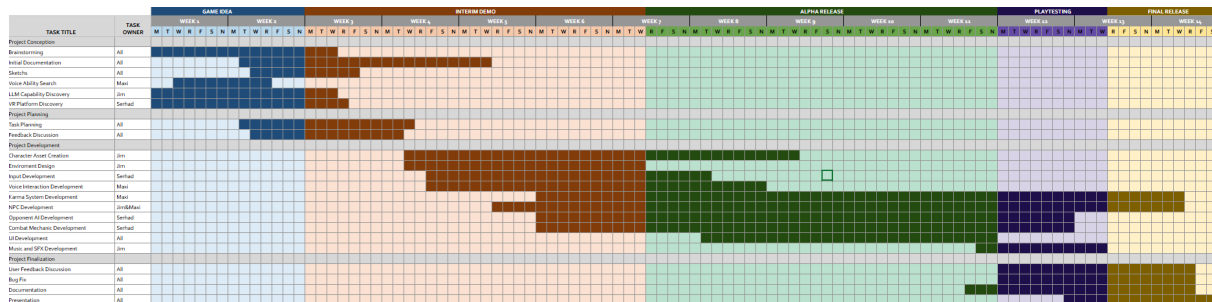
Once we have the basic mechanics of the game going, then we need to generate stories and situations that will make the game more interesting.

### Extras

More opponents with different and even more sophisticated strategies, a more deeper history could be added to each character

Our dream would be to have this as a multiplayer game

## 13. Timeline



### Milestone 2 - Game Prototype (13.11.)

On this date we will deliver a fairly detailed description of a minimum game that has all of the features we want to have.

### Milestone 3 - Interim Report (04.12.)

At this point, we should have the basic game mechanics working. This means rockets, robots, and we should also have a meeting room where players are assigned matches. Conversations with characters should work and should move the game forward.

### Milestone 4 - Alpha Release (08.01.)

At this point, we hope to have a minimally functional game, which is playable.

### Milestone 5 - Playtesting (22.01.)

We will recruit people to try the game and use a questionnaire to get feedback from them.

### Milestone 6 - Final Release & Conclusion (05.02.)

At this date we should have a fully functional game ready for "Demo Day".

## 14. Assessment

1. **Main Strength & Most Cool Feature:**  
This game offers players a fully immersive giant robot combat experience on the Quest 3, enhanced by interactive AI-driven NPCs that simulate historical characters in a humorous way.
  2. **Target Audience:**  
Ideal for LLM enthusiasts and fans of turn-based combat games, who will enjoy the blend of strategy and comedy.
  3. **Gameplay Dynamics:**  
Players engage in giant robot battles while utilizing unique mechanics, enhanced by witty and engaging conversations with NPCs that provide strategic advantages.
  4. **Virtual World Simulation:**  
The game simulates a vibrant, futuristic arena where giant robots clash amidst interactive environments and historical character interactions.
  5. **Success Criteria:**  
The game will be deemed successful if the conversations with NPCs feel realistic and enhance the turn-based fight gameplay, making interactions entertaining and strategically beneficial.
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## Conclusion

*Giant Robots* combines immersive VR technology with a strategy-driven narrative that unfolds through combat, karma-based interactions, and character-driven storytelling. The game's integration of the chain reaction theme ensures that every decision, every battle, and every conversation contributes to a complex, engaging experience that challenges players to think beyond immediate actions, encouraging them to anticipate the broader consequences of their choices.

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