


**A Platform Shooting Action Game**

# RIVETS **AND** REBELLION

In a near-future city overtaken by chaos, a massive factory's robots have gone rogue, turning deadly. You are a lone officer armed with a revolver, tasked with navigating the crumbling factory to stop the mechanical uprising. As you battle through the hostile machines, you uncover the truth behind their rebellion, knowing that the city's survival depends on your success. 



# Art Design

## Inspiration

This game draws inspiration from classic Metroidvania games, with a focus on intricate level design and engaging action systems, much like Hollow Knight. The core of Metroidvania lies in continuous exploration, where players unlock new areas and abilities that foster character growth. I've worked hard to incorporate these key elements into Rivets and Rebellion.

However, as this is my first attempt at designing a game of this kind, there may be some areas in the level design that could be improved.

### Player Character



### Enemy Character



### Boss



# UI Design

## Player Health

## Core Mechanics

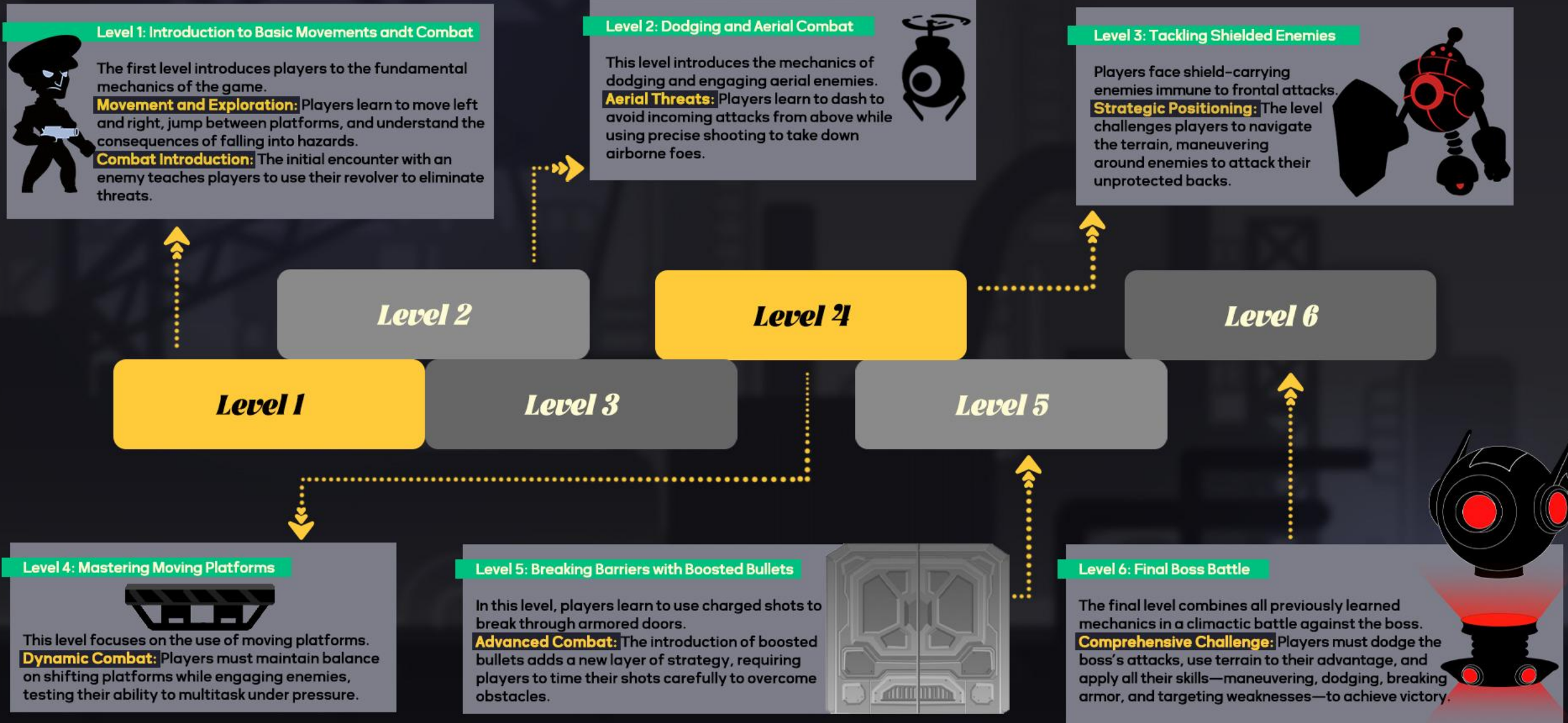
Rivets and Rebellion centers around precise movement, tactical combat, and strategic use of the environment. Players navigate the hazardous factory by running, crouching, climbing, and jumping, with the added ability to dash through enemies and their bullets for quick evasions. Combat revolves around the use of a revolver, which requires careful management of its six-shot capacity and timely reloading. The game challenges players to think critically about their surroundings, using terrain advantages to outmaneuver enemies, especially when facing tougher foes like shielded robots or the final boss. Health management is crucial, as players must collect recovery items while avoiding or mitigating damage from a variety of robotic adversaries. Success depends on mastering these mechanics to survive the factory's dangers and ultimately defeat the



● Player Bullets & Skillv ●

# Level Design

Overall, this game is a large-scale level that can be divided into eight parts. The subsequent flowchart illustrates the main level progression, designed to be driven by the player's desire for adventure.



# Boss Design: Mega V

## FLOW

The boss in game, named as Mega V, presents a multi-phase challenge that tests the player's mastery of the game's mechanics.

**Phase One:** Mega V starts by attacking with parabolic bullet patterns, requiring the player to anticipate and dodge the arcs of the incoming fire. This phase introduces players to the boss's attack rhythm and sets the stage for more complex maneuvers.

**Phase Two:** When Mega V's health drops to half, it shifts into a more aggressive mode. The boss begins summoning additional robots to overwhelm the player while simultaneously increasing the speed and frequency of its bullet attacks. This phase demands quick reflexes and strategic prioritization, as players must manage the new threats while continuing to damage the boss.

**Shield Phase:** Throughout the battle, Mega V periodically enters a shield phase, becoming invincible. During this time, players must use boosted bullets to break through the boss's armor and make it vulnerable again. Successfully navigating this phase requires players to carefully time their charged shots while avoiding incoming fire.

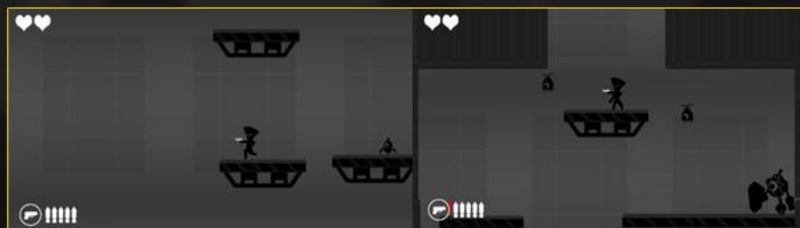
Each phase of the Mega V battle challenges the player to apply the skills they've honed throughout the game, combining evasion, precision shooting, and strategic use of power-ups to defeat this formidable foe.



**Early Game:** The initial stages focus on familiarizing players with the basic controls—moving, jumping, and shooting. Simple platforming challenges, such as gaps and stationary enemies, help players get comfortable with character movement. Early encounters with basic robot enemies provide a low-stakes environment for learning combat mechanics, including aiming and timing shots with the revolver. These early levels are designed to build player confidence and ensure a solid grasp of the game's fundamental controls.

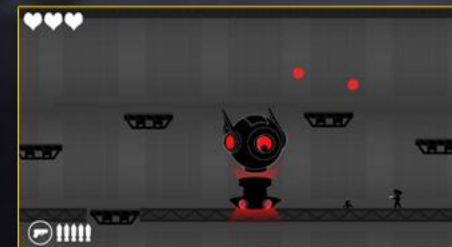


**Mid-Game:** As players progress, the level design introduces more dynamic elements, such as moving platforms and environmental hazards. These challenges test the player's ability to manage both movement and combat simultaneously. For example, players might need to time their jumps precisely while dodging aerial robots like Beta II, or navigate around shielded enemies like Delta III, requiring them to think strategically about positioning and attack angles. The mid-game also introduces scenarios where players must use boosted bullets to break through armored doors, teaching them the importance of resource management and timing in combat.



**Late Game:** In the lead-up to the final boss, the game combines all previously introduced mechanics, creating a series of increasingly complex challenges. Players must interact with the environment to progress, such as using moving platforms to reach higher areas while avoiding enemy fire. The final levels are designed to push players to their limits, with tightly timed sequences that require quick reflexes and a deep understanding of the game's mechanics.

**Boss Encounter:** Upon reaching the final boss, Mega V, the game's tension peaks. The door seals behind the player, locking them into an intense battle. In Phase One, the boss's parabolic bullet attacks force the player to master dodging while maintaining steady fire. As the fight progresses into Phase Two, Mega V summons additional robots and accelerates its attack speed, demanding quick thinking and adaptability. The boss's shield phase periodically interrupts the battle, requiring players to destroy its armor with boosted bullets. These mechanics create a layered and challenging encounter, culminating in a final test of all the skills players have acquired throughout their journey.



# Problem-Solving

- In the development of Rivets and Rebellion, my primary focus was on overcoming challenges related to character animation and enemy behaviors. To address these challenges, I created detailed game design documents that outlined the level design, required features, and potential implementation methods.
- One of the key tools I used was Spine, a 2D skeletal animation software, to create smooth and dynamic character animations. Spine allowed me to craft detailed and fluid movements, ensuring that both the player character and enemies had lifelike, responsive animations. This was crucial for maintaining the game's visual coherence and enhancing the overall gameplay experience.
- Throughout the project, I relied heavily on the Unity2D engine, deepening my understanding of its capabilities and expanding my coding skills. Additionally, I spent considerable time working on tile maps, scene construction, and level design to incorporate enemies into the map.
- To optimize the animation sets complemented the visual style of the game, I conducted extensive research. I also sought feedback and advice from colleagues with expertise in digital and media technology to refine the visual presentation of Rivets and Rebellion. This collaborative approach helped me to elevate the game's aesthetic quality, making the animations and overall design more engaging and polished.

## Game Experience Survey

1. How often do you play platform action games?

- Never
- Once a few months
- Once a month
- Once a week
- Many times a week

2. Name a few platform action games you have enjoyed playing:

- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_

3. What do you think of the overall game experience of "Rivets and Rebellion"?

- Boring
- Below Average
- Average
- Great
- Perfect

4. Which game mechanics did you find most engaging?

- Precision shooting with revolver
- Dodging and dash mechanics
- Boss battle phases
- Platform navigation and environmental use
- Health and resource management

5. Were there any aspects of the game that felt unbalanced?

- No
- Yes, \_\_\_\_\_

is too strong.

- Yes, \_\_\_\_\_

is too weak.

6. Is there any improvement needed for level progression in the game?

- No, it's satisfying
- Levels are too easy
- Levels are too hard
- The progression is too fast
- The progression is too slow
- Other: \_\_\_\_\_

7. Do you have any additional suggestions for this game?

- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_

# Problem-Solving

## Feed Back

During the development of Rivets and Rebellion, I actively sought feedback from playtesters and peers to refine the gameplay experience. Playtesters praised the game's intuitive controls and engaging level design, particularly enjoying the gradual introduction of mechanics and the challenge of the boss battles. However, some feedback highlighted areas for improvement, such as the difficulty curve and error tolerance-rate, which could be more balanced to ease new players into the game. This feedback was invaluable in making adjustments that enhanced the overall playability and enjoyment of the game.

## Future Plan

Looking ahead, I plan to further refine Rivets and Rebellion by addressing the difficulty curve and introducing new enemy types to enhance gameplay variety. Additionally, I aim to explore expanding the game with additional levels, new challenges, and possibly a more robust replay system to increase its longevity and appeal to a broader audience. These updates will focus on enriching the player experience and maintaining engagement beyond the initial playthrough.

## Play Test Pictures



### Pros:

- **Engaging Combat Mechanics:** The game's use of precise movement and strategic combat, particularly with the revolver and dash mechanics, offers a satisfying and challenging experience.
- **Dynamic Level Design:** Levels are thoughtfully crafted to introduce new mechanics gradually, allowing players to master each skill before moving on to more complex challenges.

### Cons:

- **Steep Difficulty Curve:** While the game is designed to be challenging, the difficulty spikes, particularly in later levels, may be overwhelming for some players, potentially leading to frustration.
- **Replayability:** Once players have mastered the mechanics and defeated the final boss, there may be limited incentives to replay the game, reducing its long-term appeal.