

# Beats-per-Minute

GAM230

## Concept Overview

### Genre

Beats per minute is a 3<sup>rd</sup> person rhythm-based beat em' up rogue lite. The player plays as one of the roster of heroes in fast paced, rhythm-based combat. Working their way through each stage the player will collect items that will assist them in larger 1 vs 100 combat, and more mechanically complex one on one boss fights.

### Conceptual Statement

Set on a near distant future earth, gangs all over America are taking over major cities using highly advanced sonic technology gained through nefarious means. The player plays as one of the individuals wronged or oppressed by these gangs. Using their unique set of skills and weaponry, they slowly work their way through the ranks taking down different gangs and gang leaders in different cities until they eventually reach the supplier that is responsible for all of the violence.

A single run of the game will consist of navigating through areas (based on famous American cities) fighting each areas' variety of gang enemies, eventually fighting the region-specific boss. Crossing America from West to East, collecting items, the player will be able to choose which areas they stop at on their way to New York to bring down the supplier.

### Inspirations

#### Games

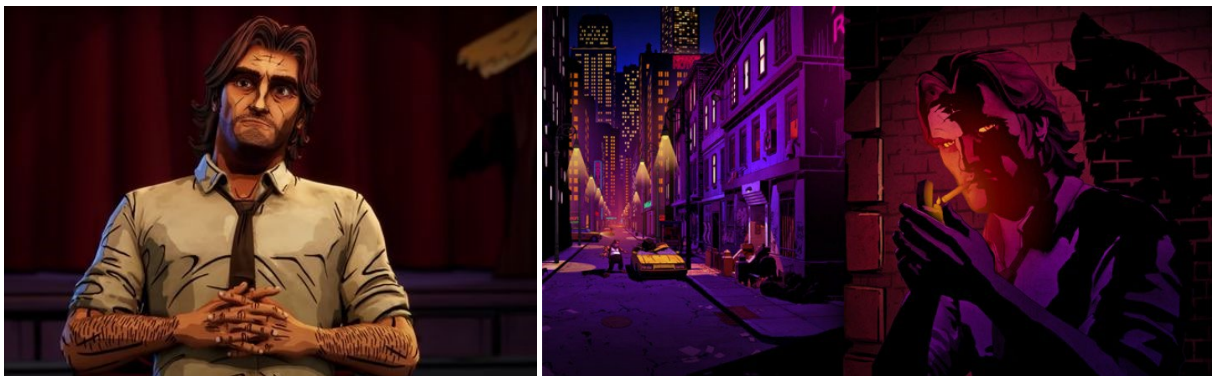
Both rogue-likes and lites are growing as an increasingly popular genre with their incredible versatility to work alongside any other genre. They also have a multitude of core features that developers can put spotlights on to better suit their vision. This means when it comes to inspirations there is a vast array of games to choose from. They are a mix of games closest to my vision as a designer and games that I have the most experience of playing.

#### Music

One of the most important elements of a rhythm-based game is the music. Therefore, when developing this concept, it was important not only for the music to fit the gameplay but for it to have as much thematic relevance as possible. This led to taking inspiration from the various regions of America to influence the individual stages music, for example, in the south Louisiana exists as the birthplace of blues and to the east New York is more associated with jazz.

#### Artstyle

*Cel-Shaded:*



## Intended Player Experience

### Core Pillars

#### Fast Paced:

- The game will be designed around the idea of speed. This means there shouldn't be anything in place to slow the player down in any way and combat should be quick and to the point.
- A clean UI is also required. If the player has to spend excess time interacting with the UI or working out data given to them, then this directly opposes the core idea of speed.
- Tasks done should either be done quickly or have multiple clearly defined intervals to make the player feel like they are doing several things quickly instead of feeling like they are doing one thing gradually.
- Combat should feed into this pillar by playing into the beat em' up genre; having several enemies the player darts between.

#### On Beat:

- One of the more obvious pillars of this concept is that the game should be designed around the rhythm-based concept.
- This should not just be limited to just the combat however, wherever possible within the game design, the question should be asked how can this element be made rhythm based?
- If a system cannot be made rhythm based, then this raises the question how can this element be made to reflect the beat? This could include smaller elements such as menu navigation where the text can be made to pulse on beat.

#### High Impact:

- The combat should have a certain level of weight to it. Despite the fast pace, each attack should give the impression that it hits hard and make the player feel powerful.
- With multiple characters designed, each one should use this pillar as their basis to branch off in unique ways.
- This feeling can be reflected both in levels of damage and use of animation techniques, an example of this being the style of hit stop used in *God of War* (Santa Monica Studios, 2018). Also, elements such as audio and even haptics can give more ways to encapsulate this feeling.

#### Rewarding to Exploration:

- The player should feel rewarded for their time spent exploring areas and various systems.
- Beyond rewarding them for exploring maps, they should feel rewarded for doing their research and connecting the dots in the narrative, similar to the *Dark Souls* franchise (From Software, 2011) that encourages the player to pay attention and work out the answers for themselves.
- The flip side of the coin that is encouraging players to explore is being more hands off in the approach. Beyond the basics, the player should not feel like they are being hand held when exploring, instead the reward is found in working out the solution on their own.

## Mechanics Overview

### Areas:

- *Sequencing*: In one run the player is going from West to East across America, on a road trip from city to city. Each time they defeat an area they are shown a map of the next available area and must choose one of two available options for their next stop on the road trip.
- *Navigation*: Each area will consist of a large open space with platforms that support vertical traversal abilities. Hidden in these areas will be unique currency that can be used to purchase unstable upgrades.
- *Boss Arenas*: After fighting the waves of that area the key to the boss arena will drop and the player will be free to enter and fight the boss. The boss arena will be a smaller space to facilitate a 1 on 1 fight, with hidden secrets for players that choose to explore after the fight.

### Items:

- *Upgrades*: Items are minor upgrades that will enhance the stats of your weapon/abilities in a diegetic fashion. For example, recoil spring causes hits to impact twice at 60% power, and oxidizer tank filters the user's blood and pumps excess oxygen increasing their movement speed.
- *Equipment*: Similar to the existing system in *Risk of Rain 2* (Hopoo Games, 2019), the player will also be able to pick up an equipment item throughout the game. Equipments can be of any rarity including boss items and unstable upgrades, but instead of being a passive buff they act as an ability the player can use on cooldown. This is a way to give the player more freedom to express their individuality and playstyle.
- *Item Shop*: In between stages the player will be given the option to visit crazy Marco's travelling knick-knack shack, a shop that will appear on the road trip map and have 3 random items for sale which the player can purchase with currency earned for beating waves and bosses.
- *Unstable Upgrades*: In addition to the 3 available upgrades at crazy Marco's travelling knick-knack shack, there is a fourth unstable upgrade that the player can buy with oddities (a currency hidden in levels that is carried through runs). For example, fire fist adds bonus flame damage to hits on beat but if the player misses the beat the fire recoils and deals damage to themselves, and the fluffy teddy suit halves damage taken but also halves movement speed.
- *Boss Upgrades*: After beating a boss, a boss item will drop, these items are very powerful and are themed around that specific boss.

### Combat:

- *Character Framework*: Each character will be unique and themed around their specific genre of music. However, they will also follow a specific structure to help the player easily slide into their playstyle. Such things as each having a heavy and light attack, so the player understands that pressing those buttons will result in whatever that character's variation of that attack is.
- *Timing*: Timing is very important in a rhythm-based game, however, unlike more heavily rhythm-based games like *Guitar Hero* (RedOctane, 2005) the player has a lot more to pay attention to than just the beat. So as a result, the design cannot be as punishing in a game like this, instead the intention should be to reward the player by giving them a damage multiplier for each hit they make on beat that breaks when they mess up their timing.

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- *TempOverclock*: Throughout the stage the player will build an ultimate meter, similar to the Spartan rage mechanic in *God of War* (Santa Monica Studio, 2018), that when activated will give the player control over the tempo. This means the player can go very aggressive and spam attacks without worrying about breaking their damage multiplier.
- *Healing*: The player will have a limited number of health serums to use that are refilled between stages. As well as this the player will receive a small health boost for defeating a wave and a full health boost for defeating the boss. Also, the player will receive bonus healing for perfectly timing their health boost on beat.
- *Solo or Team*: Any characters with healing abilities must have a way of using it on themselves or others, the same goes for characters that specialise in soaking up damage, and those with other specialties. If this game is to succeed as both a single and multiplayer model each character must accommodate for both playstyles.

### Abilities:

- *Primary Fire*: The primary fire is the ability the player will be using most; it needs to be simple and effective. It also needs to be a balance amount of damage based on who frequently it can be used.
- *Secondary Fire*: A more freeform source of damage, similar to the primary fire as it will usually have a low cooldown but freeform in the sense that it can play more to the characters playstyle.
- *Unique*: This ability as the name suggests should be unique to the character and embody their purpose in either solo or team player. For example, if the character is fast and roguish then their ability might be some sort of cloaking device to support their playstyle.
- *Utility*: The utility is interesting as it has two types of fire, both a primary and secondary version after activating it. The game is a beat em up through and through so the primary source of combat should behave as such, however, with a utility the players options are briefly expanded for specific scenarios. For example, one of the modes of fire with a utility might be to give the player a ranged option to take care of an enemy they can't reach in that moment.

### Score:

- *How to Score Points*: During each stage the player can score points, these points are achieved by defeating enemies and finding items. Boss fights also factor time taken to beat into the end score.
- *Score Multiplier*: During the stage depending on how well the player times their abilities, they can increase the score multiplier which will slowly decrease over time. The only way to keep it up is to continue playing to the beat.

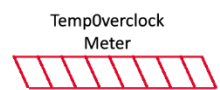
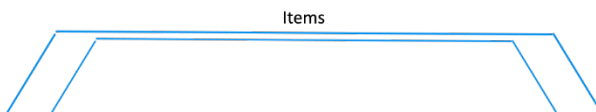
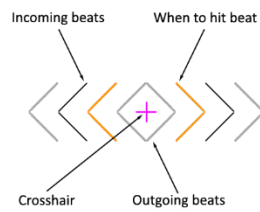
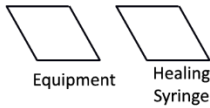
# Mock-Ups

## UI

### Unlabelled:



### Labelled:



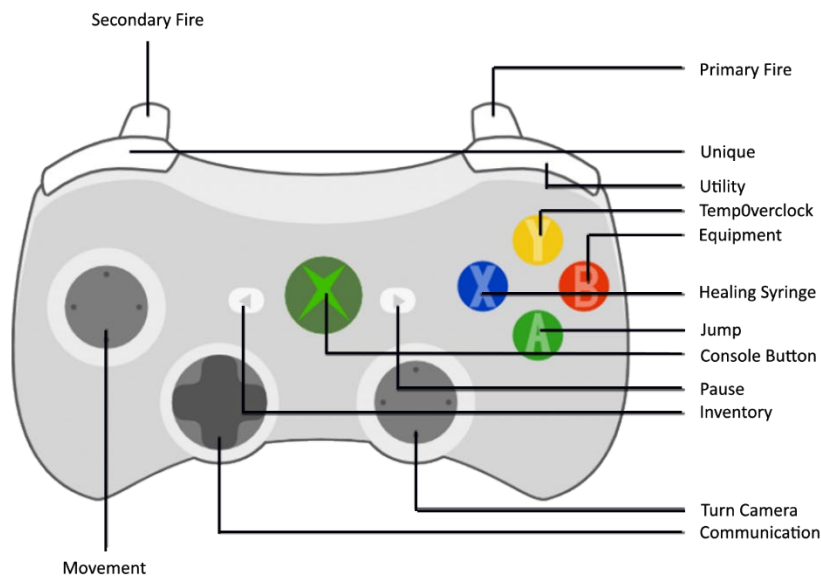
**Reasoning:**

It was important to strike a balance between easy access to information and avoiding clutter on screen. Also, depending on the importance of the information, it's size and placement would be effected. Things like abilities come naturally to the player and after a few uses they'll know exactly what everything does without having to look, only looking occasionally to see cooldowns, so they are relatively small and in the corner. In contrast, items need a large space due to the sheer quantity of them, but they also need to be somewhat central because the player will not instinctively know which items they have.

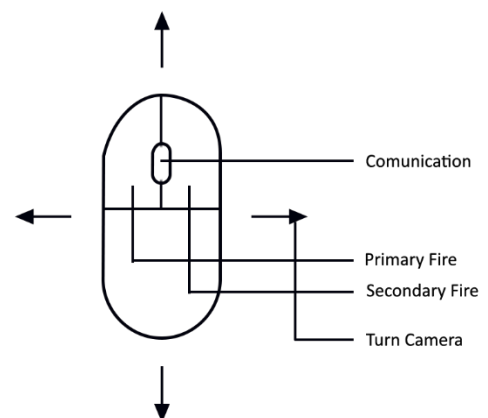
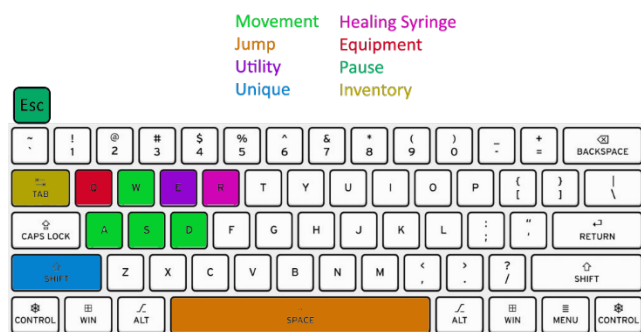
The equipment and syringe are more important than abilities, the player will need to easily know how many syringes they have and what equipment they have at any time so they are larger than the abilities. Exact health is made less important by things like vfx showing when the player is low, the same goes for TempOverclock, for that reason they are both of moderate size in the empty space of the corners. Finally, the most important decision is where to place the beat timer, and whilst I ultimately decided to place it on the crosshair where the player's focus is, similar to *Bullets-Per-Minute* (Playtonic Games, 2020), there was consideration to putting it at the top or bottom, more akin to *Crypt of the Necrodancer* (Brace Yourself Games, 2015).

**Controls**

**Controller:**



**Mouse & Keyboard:**



### Reasoning:

For the existing systems the button amounts work perfectly and even leave room for a communication wheel on the d-pad on the controller and the middle mouse button on the mouse, this means modern quality of life features such as a ping system could be implemented. The reason for the placement of abilities exists the way it does is based on how intuitive it is to reach that button without actively searching for it. For example, in both controller schemes there are fingers always resting on the primary and secondary fire buttons, as these are abilities that will be used most frequently.

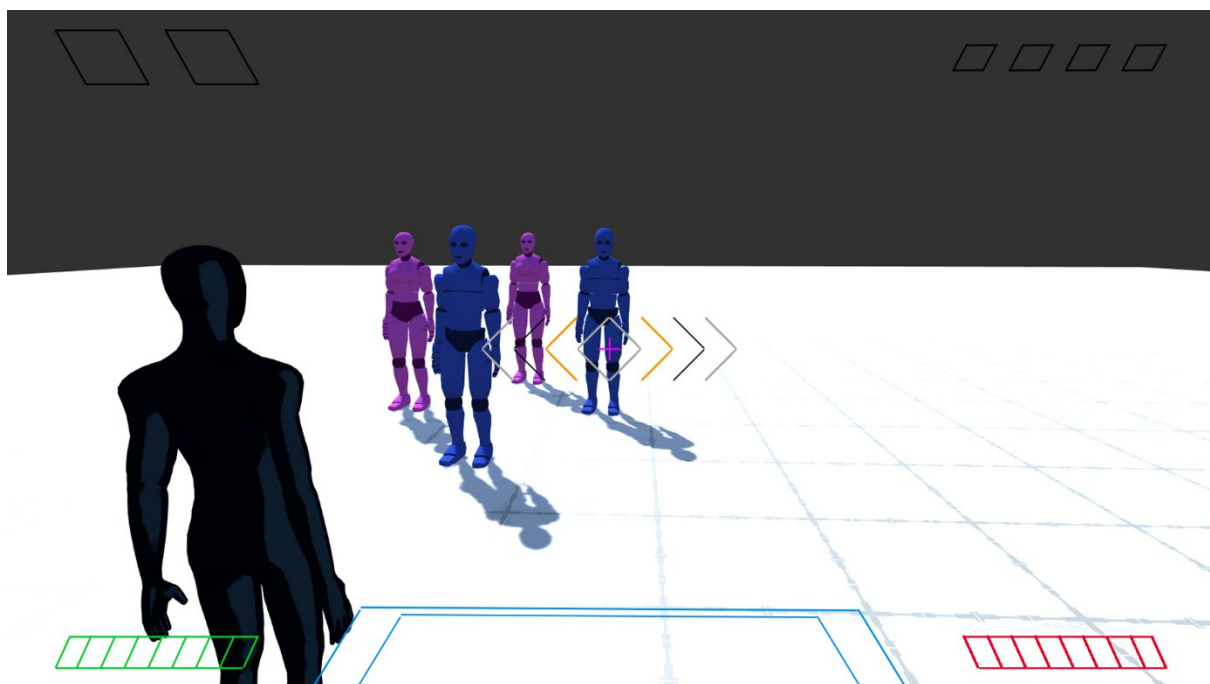
It was also important for each ability to have a dedicated input, with the fast-paced gameplay and actions required to be used with specific timing, the player simply does not have time to be selecting what they want from wheels or menus. Although the current layout does not have a dedicated interaction key, the gameplay would simply be designed around that fact, with picking up items and opening doors being automatic.

### Combat Perspective

GIF:



UI overlay:





### **Reasoning:**

There are a few reasons the camera is positioned where it is. I wanted to give a tight and personal feeling, similar to *God of War* (Santa Monica Studio, 2018), so the combat can feel cinematic, impactful, and carry weight. A zoomed out camera may detract from these values making the players connection to the individual feel sterile and impersonal. It's also important to give enough space in order for the player to gather information and assess their situation, so the character model needs to be small enough on the screen to achieve this.

BPM relies very heavily on timing so it's extremely important that the beat counter is not obscured in any way. For that reasoning offsetting the character model is key to keeping that tight perspective. Also, if the game does not feature any tab targeting then seeing both the crosshair and what it is pointing at is crucial for ranged attacks as well as close combat.

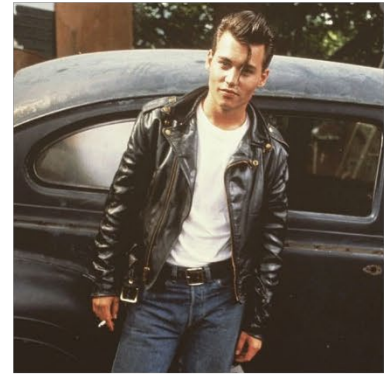
## **Character Sheet**

### **Reasoning:**

I made this character sheet to give a more detailed example of what a character in this game will look like and how they will behave in the player's hands. It was important to settle on values such as base health as soon as possible so I can decide on factors such as enemy damage, equivalent enemy health, and how to scale the health of more tanky characters.

Deciding on damage values and timings was equally important, many character based games start out with one character for balancing purposes and then developing the rest of the roster around them. When I decided on these values it made me realise that systems I had not yet considered needed to be added when balancing, for instance, the score multiplier that incentivises perfect timing.

Finally, I wanted to develop a format that can be used for all characters moving forward. One that will clearly and concisely display all the information someone needs to implement the character from concept. This way once the design team makes a new character it can be handed off to a programming department without any further need for clarification.



# PRESTO

BASE HEALTH: 200HP

**PRIMARY FIRE:** KICKS THAT FIRE ONCE PER BEAT UP FOR 4 BEAT COMBO. EACH KICK DEALS 50 DAMAGE OR 75 ON A PERFECT. PERFORMING A FULL 4 HIT COMBO WILL ADD 1 TO THE SCORE MULTIPLIER. RANGE IS A 2M ARC.

**SECONDARY FIRE:** BURST FORWARD 20M ENDING WITH A 2M JABBING KICK FOR 100 DAMAGE. ON PERFECT TIMING THE THRUST AND DAMAGE ARE BOTH X 1.5, AND ADD 1 TO THE SCORE MULTIPLIER. IF THE PLAYER COLLIDES WITH AN ENEMY OR WALL DURING THIS DASH IT IS IMMEDIATELY CANCELLED AND THE KICK IS FIRED. THE COOLDOWN IS 15 BEATS.

**UNIQUE:** ACTIVATE A CLOAKING DEVICE THAT HAS A 3 BEAT STARTUP AND LASTS FOR 10 BEATS, ON A PERFECT TIMING THE STARTUP IS 0 BEATS AND THE DURATION IS 15 BEATS, ADDING 1 TO THE SCORE MULTIPLIER. ANY ABILITIES USED WHILE CLOAKED WILL IMMEDIATELY REMOVE IT AND ANY DAMAGE DONE IS CRITICAL. A 40 BEAT COOLDOWN.

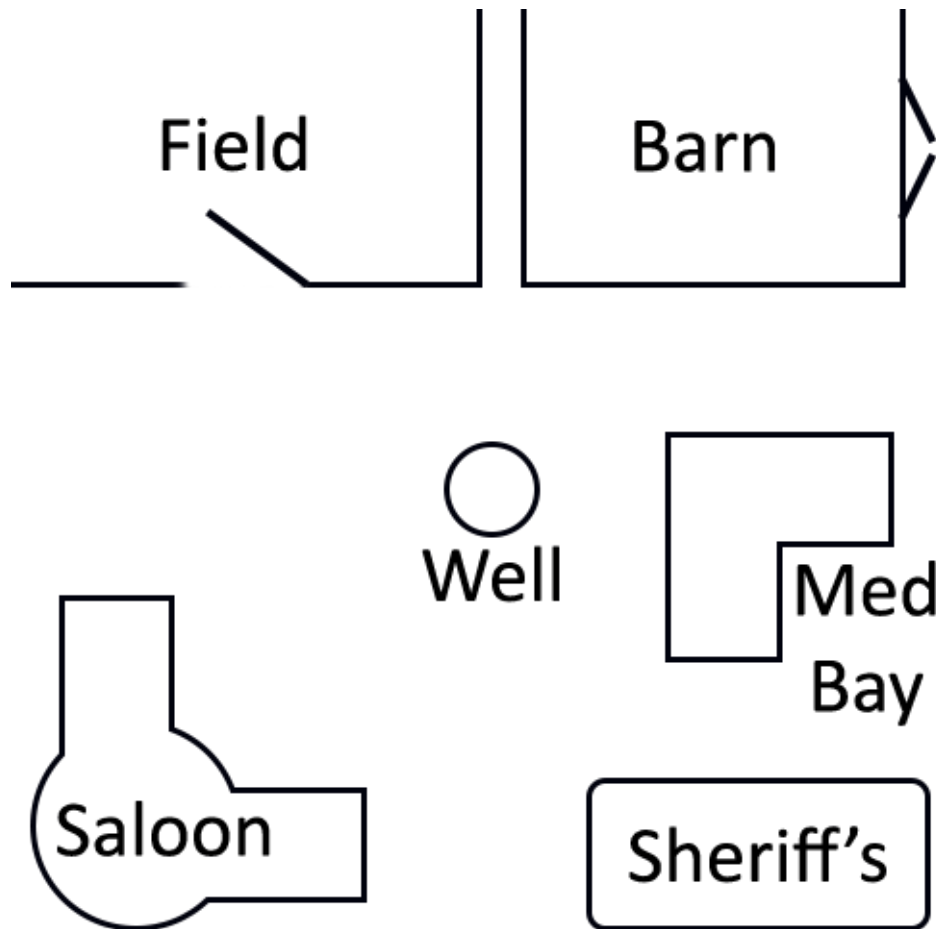
**UTILITY:** PERFECT TIMING ADDS 2 TO THE SCORE MULTIPLIER.

**PRIMARY:** FIRES A GRENADE THAT STICKS TO WHATEVER IT HITS, IF IT HITS AN ENEMY IT DEALS 50 DAMAGE, HEADSHOTS DOING CRITICAL. AFTER 3 BEATS IT DETONATES DOING 100 DAMAGE IN A 20M RADIUS. PERFECT TIMING DOUBLES THE RADIUS.

**SECONDARY:** SWING THE EXHAUST PIPE IN A 3M ARC, ONCE IT MAKES CONTACT WITH THE GROUND OR AN ENEMY IT DETONATES THE GRENADES IN 20M LONG, 40M WIDE CONE THAT DOES 300 DAMAGE.

## Maps:

### Labelled Texas Map:



### Reasoning:

This is a very simple top-down concept of a map to be used in BPM. The core design of these maps should not be to be so vast that the player is unable to explore them, nor is it to be so barren that the whole concept of exploration is removed. It is to give the player space to utilise their abilities to their playstyle, which means access to closed off areas and choke points that the player can use to their advantage, as well as open stretches of land that the player will have to traverse if they want to access other buildings and explore further.

Accommodating several playstyles does not mean accommodating manipulating the mechanics to the point of breaking, if a player were to be given lots of methods of vertical traversal then they might use this to their advantage and remain outside an enemies range. Recognising that this is a close combat beat em up game with little to no ranged capability, means that maps have to be designed with this in mind for sake of fairness towards both the player but also the game.

Also, when designing maps for this game, much like the soundtrack, they should be overt in their references to their origins but bring the soul of this world into them too. For example, there is a Sheriff's office that pays homage to some southern stereotypes, but it would most likely be razed by gangs or defaced in some way to be inline with this world's current values.

## Gameplay Values

### Potential Systems

#### Tab targeting:

- *Pros:*
  - Takes focus off targeting so the player can focus better on timing their actions to the beat.
  - Allows for dynamic movement, when targeting an enemy and moving to the side they will circle the enemy.
  - Makes it very difficult to miss when the players positioning is perfect.
- *Cons:*
  - Removes an element of skill when targeting an enemy.
  - Makes it harder to aim for a specific section of the enemy's body, for example headshots.
  - Makes rewarding hitting a specific section of the body less fair.
- *Decision:* **No**, tab targeting will not be used. Ranged attacks should feel rewarding when the player hits a critical spot. Tab targeting is an option to give the player less to focus on in close combat situations, something that rings especially loud when the player has rhythm-based elements to focus on. However, this conclusion can only be drawn for a game with few to single enemies, not a beat em' up.

#### Interaction:

- *Pros:*
  - It allows the player to manually select what they want to pick up/open, especially important in a game with shared loot.
  - When approaching a construct such as a door or ladder during combat, it prevents the player from accidentally using it.
  - An interaction would be free of timing requirements, a player could press it whenever they needed.
- *Cons:*
  - Whilst the PC has several keys and buttons to choose from, an interaction key could easily be bound to the F key as an example, the controller has a much higher demand for control real estate. It would have to be bound to the pressing in of the thumbstick which is a notoriously un-intuitive binding.
  - It gives the player more to think about during combat situations, instead of just walking past an item to pick it up they would have to interact with it.
  - It becomes less clear for newer players what doors etc they can use and what they cannot, when they are unable to walk directly into them and must instead look for a interact prompt.
- *Conclusion:* **Yes**, an interaction key will be implemented. While I initially leaned to a more hands off approach where simply passing over an object would pick it up, I then had to consider the implications of a multiplayer system. In a situation in which all the loot is shared the players must be given the option to divide it equally, lest their teamwork fall to ruin.

## Enemy Values (*For 1 player*)

### Grunts:

- *Base Health & Point Value:* 200HP, 100 Points
- *Attacks:*
  - *Wind-up punch:* Pull back for 1 beat, after 2 beats release a punch for 40 damage. Can be hit out of it before releasing the punch.
  - *Wind-up kick:* Pull back for 2 beats, then release a kick after 1 beat for 40 damage. Can be hit out of it before releasing the punch.
- *Head Shot:* Head
- *Hitbox:* Medium
- *Movement Speed:* Slow
- *Spawn Rate:* High

### Hunters:

- *Base Health & Point Value:* 150HP, 300 Points
- *Attacks:*
  - *Slash & Dash:* Run at the player for 3 beats, jump for 2 beats and attack for 40 damage, then running away from the player. Striking them in the air will leave them stunned.
  - *Slash & Dash Combo:* Same as the slash & dash, except if they land the first hit they side step for 1 beat and then repeat the jump and attack again.
- *Head Shot:* Head
- *Hitbox:* Medium
- *Movement Speed:* Fast
- *Spawn Rate:* Medium

### Concussive Ticks:

- *Base Health & Point Value:* 50HP, 100 Points
- *Attacks:*
  - *Detonate:* Once in range of the player they will stop and beep for 3 beats and then explode in a 10m radius for 70 damage unless destroyed.
- *Head Shot:* Flashing orb on their back
- *Hitbox:* Small
- *Movement Speed:* Fast
- *Spawn Rate:* Medium

### Sluggers:

- *Base Health & Point Value:* 600HP, 600 Points
- *Attacks:*
  - *3-hit combo:* Pulling back for 1 beat and then releasing after 1 beat, repeating this process 2 more times. Each hit dealing 40 damage, they can only be stunned out of the combo not hit out of it.
  - *Rising Uppercut:* Pulling back both arms for 2 beats and then releasing after 1. Doing 70 damage and sending the player flying into the air temporarily out of combat.
- *Head Shot:* Head

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- *Hitbox*: Large
- *Movement Speed*: Slow
- *Spawn Rate*: Low

### Diabla:

- *Base Health & Point Value*: 4000HP, 15,000 Points
- *Attacks*:
  - *Dashing Axe Kick*: Faces a player and then for 2 beats crouches still, after lunging forward up to 20m and in 1 beat unleashes an axe kick directly down for 70 damage.
  - *High Heel Jab*: Pulling back her leg for one beat and unleashing a flurry of jabs once per half beat, each doing 30 damage.
  - *Pin*: Gets low and charges a kick for 2 beats then sends a player flying in the air with a rising kick and then pins them to the ground, stomping on them three times. Doing a total of 115 damage, 40 for the initial kick and 25 per subsequent stomp. She can be knocked out of the pin by delayed abilities or allies.
  - *Helicopter Kick*: Leaping in the air for 1 beat and spinning around with legs extended doing 50 damage per beat for 5 beats.
- *Head Shot*: Head
- *Hitbox*: Medium
- *Movement Speed*: Fast
- *Spawn Rate*: Boss of Las Mujeres
- *Music Genre*: Salsa

## Ally Values

### Effects:

- *Critical*: Double the value of damage on a critical hit.
- *Bleed*: After hit with a bleed effect, target will lose 10HP per beat for 5 beats. The bleed effect can stack up to 4.
- *Poison*: After hit with a poison effect, target will lose 30HP every 2 beats for 10 beats. Poison cannot stack.
- *Cloaked*: While cloaked the user cannot be targeted and is only visible to teammates with a faint outline. They can still be hit by AOE effects however, which will end cloaking.
- *Taunt*: While the user is taunting all enemies within the specified radius will target that player only for the duration.
- *Stunned*: While stunned the target will be temporarily unable to move or use abilities for 4 beats.
- *Regeneration*: While afflicted by regeneration the target will continue to gain the specified amount of health for the specified amount of time regardless of how far they are from the caster unless they die.
- *Armour*: Some enemies may have an extra layer of health called armour. It has no bonus to damage blocked but it will absorb all excess damage on the hit that breaks it.
- *Falling*: Due to the explorative nature of this game the player does not take fall damage, knock back only serves to reposition the player and nothing more.

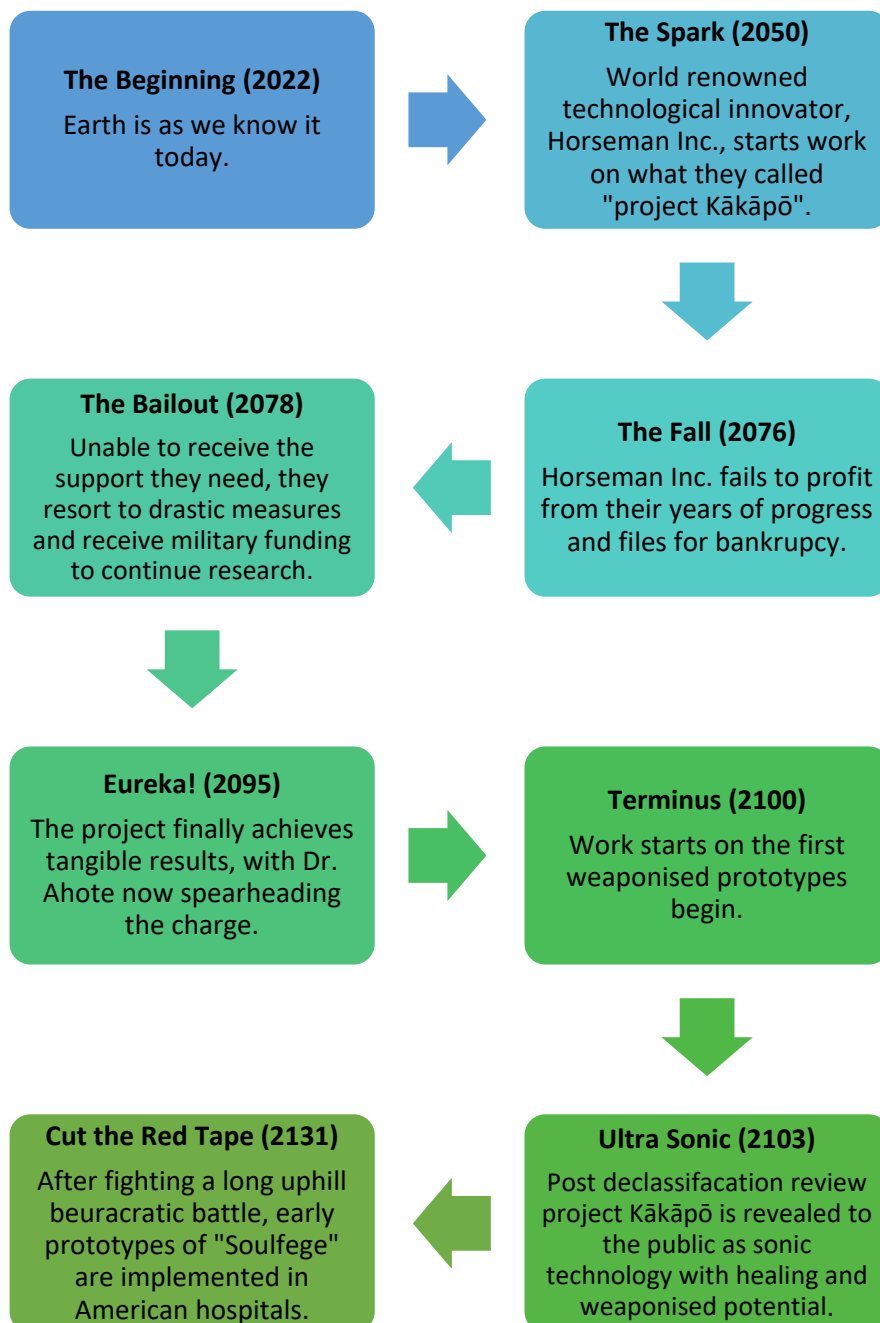
## World

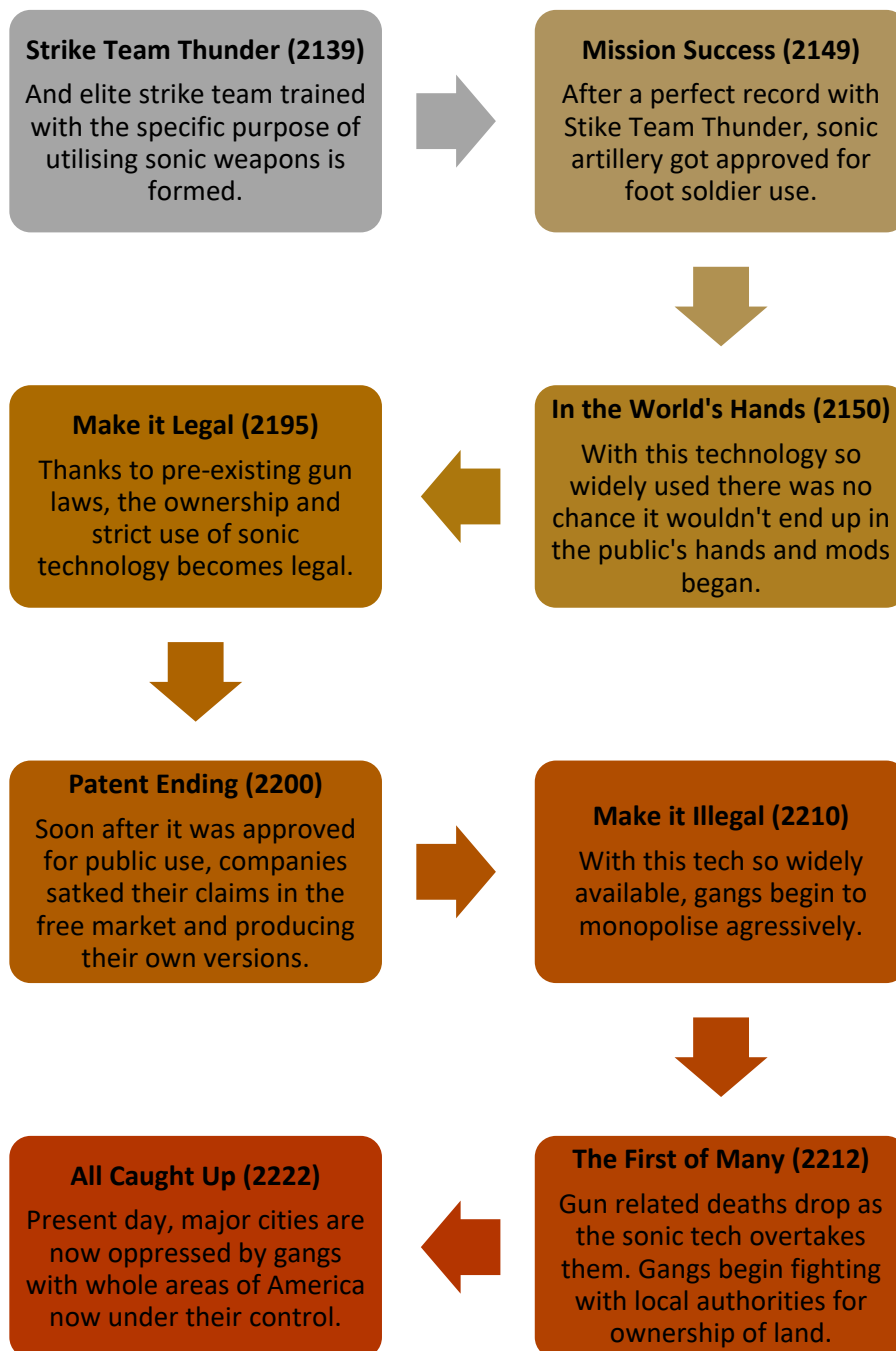
### Setting

#### Summary:

Near distant future earth, gangs all over America are taking over major cities using highly advanced sonic technology gained through nefarious means. In 2222, the gangs unite with the purpose of controlling the entirety of America; all out war has begun. The player plays as one of the individuals wronged or oppressed by these gangs and using their unique set of skills and weaponry, you take down different gangs and gang leaders in different cities until you eventually reach the supplier that is responsible for all this violence.

#### Timeline:





## Technology

### Horseman Inc.:

- *Soulfege*: What started out as a heavy-duty life support machine that used a serum alongside a machine that adjusts the body's natural frequency and causes the body to rapidly cellularly regenerate, past human potential (less effective against disease and terminal harm). Now it exists as a handheld tuning fork shaped syringe that can be quickly applied in a crisis situation.
- *Vibratos*: Knuckle-duster/boxing glove style weapon that requires direct contact with the target to cause harm. This device has been known to literally shatter bones when used correctly.



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- *Hielamolo*: Generates a low frequency bubble around the user, completely negating high speed shrapnel. This was the main reason firearms became obsolete.

### Smith & Sons Firearms:

- *Rattlesnake*: A rechargeable grenade that will emit a quick and powerful burst of sound that will briefly stun a target as well as doing a large amount of internal damage.
- *Tiger Shrimp*: A one time use canon that fires a beam of vibrations, piercing through multiple targets.
- *Armadillo*: A heavy duty take on the Hielamolo, covering the user in a layer of armour that can emit even more powerful vibrations.

### Destroyer Mods:

- *Moonwalkers*: One of the first to get their hands on an early prototype of the Vibratos, they began modding at a very early age and this is one of the products of their years of work. The Moonwalkers are a take on the glove that you wear on your feet to increase your movement speed.
- *The Tuning Fork*: A melee weapon that could be described as a sword or bat, either way it hits like a cement truck.
- *Gravedigger*: A simple shovel with sonic mods, it can be used directly on a target but is somewhat slow and ineffective. Its real use is to jam into the ground and making small and powerful vibrations to knock your target off balance.

### M. Tech:

- *Brass Canon*: While M. Tech originally made instruments, the sudden shift to sonic tech left a gap in the market they filled, making mods for pre-existing instruments. The brass canon and the name suggests is an attachment for brass instruments.
- *Axe Sharpener*: The axe sharpener is intended to sharpen your axe for war, or at least that's what the marketing will tell you. Fact is this attachment will work on any string instrument.
- *Re-percussion*: Defending yourself isn't enough, make those who try to harm you and your family face the re-percussion. Works on any percussion instrument.
- *Woodwind*: While M. Tech had been working on woodwind for a number of years, they are yet to find a solution that works.

## Characters

### Presto:

- *Profile*: An Italian American man that's silver tongued and sticky fingered. Despite his roguish nature, he steals for his family and he fights to keep his slice of the world safe. When the big attack begins all flights are down and he needs a way home to keep his family safe.
- *Appearance*: He is short, with tan skin, olive green eyes, and slick black hair. Wearing a black leather jacket, white shirt, and skinny jeans.
- *Equipment*: He has custom Nike Air Moonwalkers, a Hielamolo that he has overclocked to give it cloaking capabilities, and an exhaust pipe packed full of Rattlesnakes.
- *Moveset*:
  - *Rousing Rumbler (Primary)*: Supersonic kicks that can be fired off once per beat.
  - *Rank Stepper (Secondary)*: A burst of speed that can be used in any direction with a 15 beat cooldown. Timing perfectly will reduce cooldown and extend it's range.

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- *Lone it Lifter (Unique)*: Activate the cloaking device and temporarily disappear from sight. Lasts for 10 beats with a 40 beat cooldown, perfect timing will increase the time cloaked. Strikes when cloaked do critical damage.
- *Whacked (Utility)*: Activating this ability pulls out the exhaust pipe, then using primary fire it will shoot out a precision rattlesnake, and using secondary will bring down the full force of all the rattlesnakes in a melee attack with the pipe. Both attacks have a long cooldown, the primary for its ranged capability and the secondary for its high damage.

### Tommy:

- *Profile*: A loudmouthed young man from Boston, the only thing that tops his love for a brawl is his love for the Red Sox. He's dangerously boisterous with a flare for the eccentric, but under all the bravado he's deeply lonely after his parents untimely passing, and desires more than anything to make a real friend. So when the big attack begins he leaps at the chance to finally fight alongside someone.
- *Appearance*: A skinny, Caucasian teen, with hazel eyes, and short brown hair. He sports a classy shorts shirt combo, as well as his tattered Red Sox baseball cap.
- *Equipment*: A refurbished Tuning Fork repaired with a steel baseball bat, a backpack full of baseballs, and a Boston horn with a Brass Canon attachment (ever the patriot).
- *Moveset*:
  - *Bonk (Primary)*: A swift whack with his tuning fork, can be fired once per two beats.
  - *Chucklehead (Secondary)*: An overhead slam with the tuning fork, has a 10 beat cooldown and a 2 beat wind up. Can be chained after a set of perfect primary swings to remove the wind up.
  - *Wreckah (Unique)*: Pull out the Boston horn for a mega sweet solo, only problem is Tommy has no idea how to play. Once it's out every 2 beats the player can use it again but the chance of malfunction goes up, if it does malfunction Tommy takes some damage and the cooldown is greatly increased.
  - *Homerun (Utility)*: Pull out a baseball, use the primary to slam it on the ground to do AOE damage which can be repeated up to ten times but the beat on which it comes back up changes to throw the player off. At any point before or during the primary fire combo, the player can switch to secondary to go for a ranged homerun, but this will end the ability which has a long cooldown.

### Daisy-Duke:

- *Profile*: A country girl whose bark is just as bad as her bite, she's a rootin tootin bullridin cowgirl born and bred. Orphaned at a young age, she believes it takes a village to raise a child, so when that village is raised to the ground by some scum of the earth gangs, well she reckons it's high time she steps up. The big attack ain't nothin to worry about when she steps into the saddle.
- *Appearance*: A very tall, muscular, deeply tan woman, with blue eyes, and dirty blonde hair in a braided ponytail. Classic cow-wrangler attire including hat, boots, and poncho.
- *Equipment*: An Armadillo model that allows for better joint movement, Vibratos with the words "First" and "Rodeo?" on each, and a heavy duty bullwhip.
- *Moveset*:
  - *Git-R-Done (Primary)*: A powerful and snappy combo of punches, going at a rate of 1 punch per beat

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- *Bless Your Heart (Secondary)*: A rousing uppercut with medium damage and high knockback. As a more tankish character, having some form of crowd control is important.
- *Holler (Unique)*: She uses her bull whip to create a fierce snap in the air, drawing the enemy's aggro. On a perfect timing it has a larger area of effect.
- *Line em Up (Utility)*: Activating this ability briefly pulls enemies towards her like a large magnet and then she can either primary fire to knock those around her off their feet leaving them temporarily stunned, or she can use her secondary to charge forward sending those in her path flying and doing plenty of damage.

### Julia:

- *Profile*: A doctor and surgeon at the top of her field, she's smart, driven, and determined to make the world a better place. When she's not advancing medical techniques or performing complex surgeries, she's at home doting on her newly born daughter and spending time with her stay-at-home husband. The big attack hit when she was away on a global medical conference, so now she wants to do whatever she can to keep those she loves safe.
- *Appearance*: A young African American woman, with dark hair in a medium-length pixie cut, and hazel eyes. She never seems to be out of her scrubs and lab coat, but she does like to bend the rules when it comes to wearing stylish shoes.
- *Equipment*: A first responder gas of her own invention, a Soulfège that has been tweaked to push a person past their potential, a microphone that has multiple M. tech attachments to amplify the human voice.
- *Moveset*:
  - *Krav Maga (Primary)*: Julia believes in efficiency, her brutal amped up martial arts show that. A two part attack, that takes one press to prime and the next beat to fire.
  - *Roundhouse (Secondary)*: A powerful strike intended to create a small amount of distance between you and your opponent, with a brief cooldown.
  - *50CCs of Kickass (Unique)*: She jams a spike into the ground that emits a small aoe gas and frequency that heals over time. Perfect timing increases the area.
  - *Rallying Cry (Utility)*: Activating this pulls out her mic, then she can either use her primary fire to give a rapid healing over time aoe that players don't have to stay in to benefit, or using her secondary fire gives everyone a speed and damage boost. As with all unique abilities it has a long cooldown.

## Gangs

### The Steel Angels:

A biker gang from the Midwest built on a small community that loved to ride, as time passed their love of bikes and what they stood for spread and their community grew and grew. Their leader was a kind and charismatic man that any member would have followed to the ends of the earth, and he gave his community a place to call home for many years. When the time came he passed that responsibility on to his son, however, his son was not the same person he was, he had no idea how to wield the power he was given.

When local authorities questioned him on the goings on of individual members, whose core values did not align with what the steel angels stood for, he took it personally and lashed out. Eventually, backing the gang into a corner of being at odds with local authorities. This would have spelled the end for the gang, but **The Supplier** gave an olive branch and with it a way to fight back, a more

responsible person would have rejected this deal... Armed with sonic tech, The Steel Angels will defend their turf through tooth & nail, and rock 'n' roll.



### Las Mujeres:

This gang was started long ago in Mexico, as an advocate for women's rights. They fought for change in their time but no matter what they did they held no power against the powers that be, for every step forward they made they were forced to make some other concession. After years of spinning their wheels in the mud, they finally decided to change their approach.

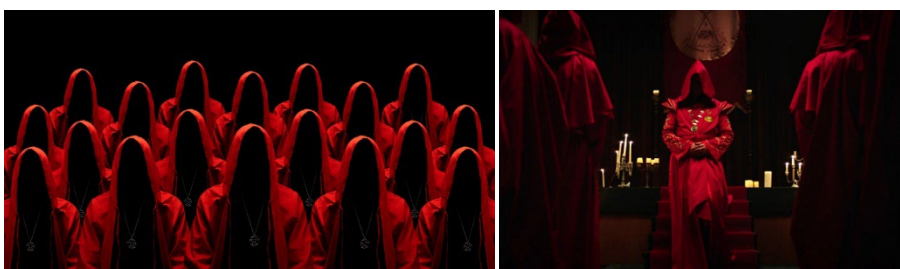
Las Mujeres rapidly became an underground crime syndicate, fighting for the same purpose but operating below the reach of the law. Instead of making concessions they were soon performing assassinations, killing those who sought to oppress. After a time they found their progress began to slow as the enemy became wise to their ways, they desperately needed a new angle and **The Supplier** was gracious enough to do what he does best.



### God's Liberation Army

A literal army of religious zealots from the South, that believe the country has fallen into sin. Of a time they held all the cards, so in the present something like equality seems like an injustice. They have used cultish methods to amass followers, making them believe they had the power to save them or the ones they loved from their problems. All the while dodging the attention of local authorities using thinly veiled lies.

Eventually reaching a number so great it's sheer size could be wielded as a threat. In spite of this they still lacked the final push to take action on their beliefs, that is until **The Supplier** reached out to them. Now they have emerged as their true selves, forcing those around them to submit to their ways.



## Artstyle & Music

### Artstyle

#### Tone:

The tone should be mature to reflect the world and characters, yet somewhat playful to reflect the whimsical nature of the gameplay. There exist grittier elements in a world on the point of crisis and a country amidst revolution, but the stories being told are not that of a country but of people. A tone that can reflect the value of fun with friends but also one that can be taken seriously when it needs to be.

#### Themes:

One of the core themes is inspiring a message of hope with the player, that no matter how hard the world gets there's always a way forwards and a way to fight for what you believe in. These characters all come from different places and have different values, yet all of them have a reason to fight, to fight is to be human.

Another theme is to look for the fun, in the grimmest of worlds and the darkest of melodies there is still a beat to play along to. Play has many meanings, and it means something different to everyone, so this game should shine a light on any and all of them. The reason the character fights is for freedom, but the reason the player fights will always be for fun, whatever that might mean to them.

#### Art Direction:

In line with these values the art style must encapsulate the essence of this game and the message it's trying to portray. A cross between playful and serious, a true worlds-collide, and I believe the best way to achieve this is through cel-shading. Cel-shading is a process that can be applied to a variety of styles from low-poly to high detail, when it's used to apply bold and distinct outlines it makes a powerful impression and subtly references a more playful comic styling.

Applying this distinctly fun style to a solemn and muted palette with high detail art, you start to achieve this balance between the opposing concepts. An example of this styling would be *The Wolf Among Us* (Telltale Games, 2013), with those distinct black linings layered ovetop tastefully realistic artwork, it leaves a powerful impression on the player.



## Music

### Genres

One of the unique selling points of this game is how it spotlights all the different genres of music in America. Whilst this means that some groups are stereotypical and some individuals are archetypal, to fall into the idea the genre of music and place creates, I still want to add as much depth to these otherwise two-dimensional characters as I can. Recognising this means I have to be as faithful to these regions as possible, including the stereotypes and genres they create.



Figure 1 – Map of USA sorted by top genre in each state.

Figure 1 clearly depicts each state's favourite genre of music; however, these genres are not necessarily the one's that would be associated with the stereotypical images we have of them. For example, when thinking of Texas a person's first thought is almost certainly not Latin music. So the conclusion must be drawn that every time a new gang/map is introduced a comprehensive study must be performed on that areas origins. A good one for this system would be how Memphis, Tennessee is known as the birth place of soul, and therefore would be an excellent genre to develop a Tennessee soundtrack to.

If the music is historically accurate with modern twist to engage younger audiences, then it stands to reason the environment and maps should behave the same way. Older buildings from when the genre first came to be, updated to be playful and vibrant with cel-shading and a select palette.

## Market

### Similar Titles

#### ***Risk of Rain 2* (Hopoo Games, 2019):**

- A very popular title in the rogue-lite genre, this game is a 3<sup>rd</sup> person shoot em' up.
- Despite existing primarily as a shoot em' up there is a variety of characters to choose from, some of which focusing heavily on melee based combat; tying this game somewhat to the beat em' up genre too.
- This game learned many of it's lessons from it's predecessor, *Risk of Rain* (Hopoo Games, 2013), before making the leap to 3D.

#### ***Bullets-Per-Minute* (Playtonic Games, 2020):**

- A rhythm-based shoot em up, the main selling point of this game is limiting the player to only take actions on beat. This means the dps is limited by this format, as well as the players reaction time to potential threats.
- Another key factor of this game is the soundtrack, which in equal parts: has a strong catchy beat, synergises well with the sound effects of player actions (reloads, dashes, gunshots, etc), and effectively reflects the setting without use of lyrics.
- Finally, the UI does a good job of reminding the player of the timing in a non-intrusive, minimalist fashion. This demonstrates acute awareness of the format of game they have chosen, knowing that FPS's require little to no visual clutter to prevent distractions of the player.

#### ***Crypt of the Necrodancer* (Brace Yourself Games, 2015):**

- Another rhythm-based game, this title is a 2D rogue like top-down dungeon crawler. The rhythm-based element takes place in the movement of the character and enemies, constricting both to the beat.
- The simplicity of the rhythm-based mechanic also allows for flexibility across a variety of enemies and environments. Where a more complex rhythm mechanic may only be used as an element of a game, the malleability of this mechanic allows it to exist as a basis for the game to build off.
- This game also has a HUD element to give the player a visual representation of timing. However, this element is far less subtle, instead opting for a more direct approach. This is made feasible by the format of the genre, meaning they have plenty of dead space to make use of. Also, the theming of the metronome adds a lot of visual appeal that ties in nicely with the theming of the game.
- This formula was so popular and adaptable that it got approved by Nintendo to make a *Legend of Zelda* (Nintendo, 1986), *Crypt of the Necrodancer* (Brace Yourself Games, 2015) style spin-off called *Cadence of Hyrule* (Brace Yourself Games, 2019).

#### ***God of War* (Santa Monica Studio, 2018):**

- While this game is neither a rogue-lite/like nor does it feature any rhythm based mechanics, there is still much to learn from its modern take on the 3<sup>rd</sup> person beat em' up genre and its weighty empowering style of combat.

## Beats-per-Minute: Design Document

- Their use of inverse kinematics to create a hitstop on the axe swing was a unique and innovative way of giving weight to the combat.
- Whilst there is a high level of polish in the gameplay and visuals, the largest appeal of this game is its story. Showing that there need not be a sacrifice of one or the other in pursuit of quality.

### **SIFU (Sloclap, 2022):**

- The most recent release from Sloclap, taking many of the systems from its predecessor *Absolver* (Sloclap, 2017).
- This game rapidly gained popularity in most part thanks to marketing on Sony's behalf, due to it being a PS5 exclusive but also thanks to its fast-paced, cinematic style of combat.
- It achieves this through use of both animation and camera angle. To give the player a more immersive feel for the animations, the camera will often move in time with the combat animations or focus in on high damage moves.
- Similar to the *Dark Souls* (From Software, 2009) franchise, deaths in game are made canonical with the revival mechanic. From certain perspectives this could be seen as a gimmick, however, it has two major benefits that play to the strengths of the game: the first being it adds to the narrative immersion of the game with dying effecting the player's suspension of disbelief less than usual, and the second being the visual charm it adds as it allows the player watch the gradual aging of the Sifu character model.

### **Rhythm Heaven Fever (Nintendo, 2011):**

- This game exists as an example of a pure rhythm-based game, one where the only input the player has to give is button presses to the beat.
- Making the concept interesting by changing up the tempo, making the player memorise specific timing patterns, giving fun visuals and surprising the player with small sudden twists.
- Unlike other aforementioned rhythm-based titles, some of the soundtracks of this game include vocals alongside the beat. The key factor being that these vocals are layered on top of the beat the player has to focus on, serving as an enhancement rather than a distraction.
- This game is a good example of how a number of factors can intentionally used to throw off a players timing to add more of a challenge. Whilst the visuals are a fun way of bringing the gameplay to life, they can also act as a way of distracting the player from the most important element, the beat.

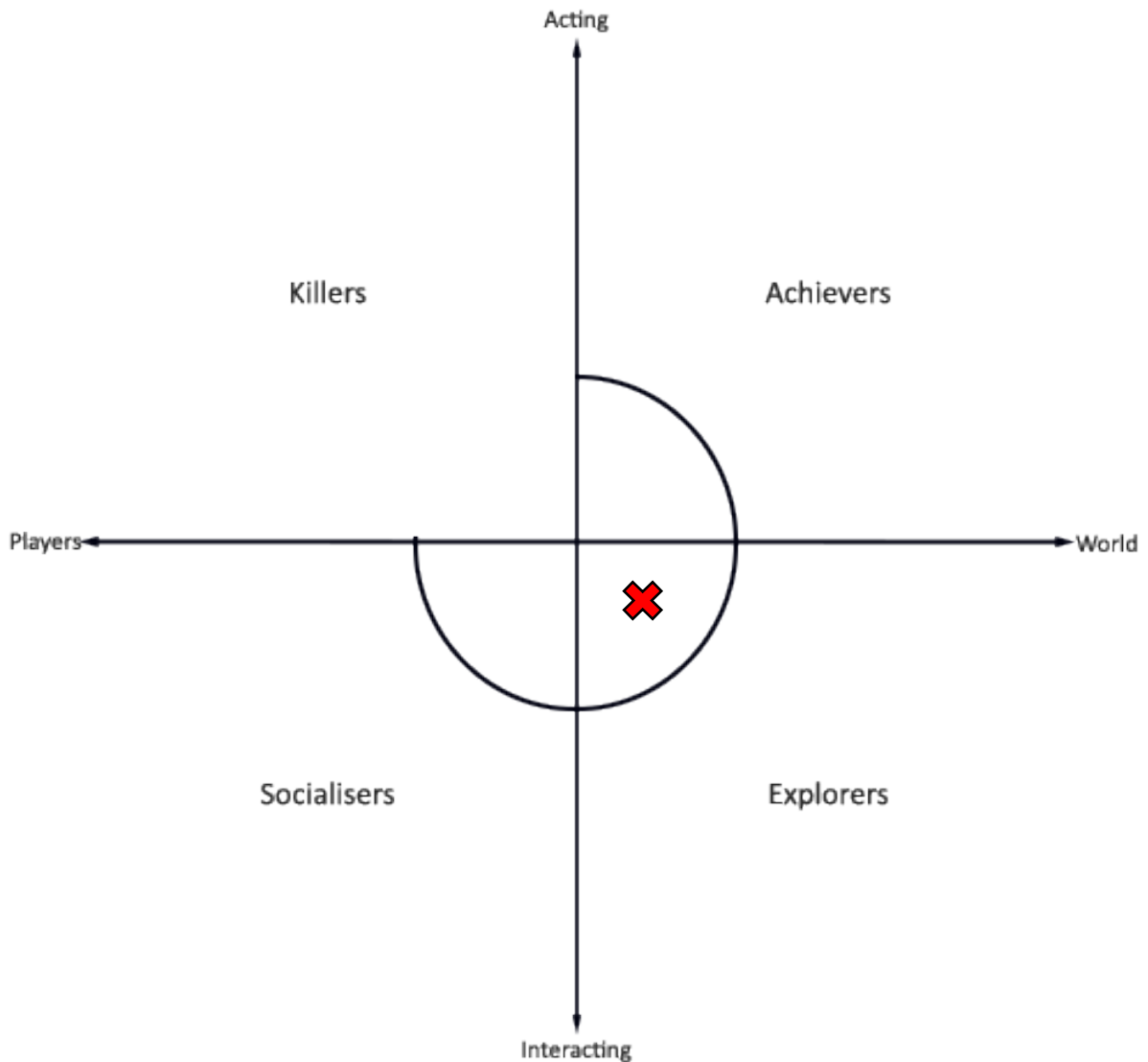
### **Conclusions:**

- *Rhythm-based*: Use timing to dictate the attack patterns of enemies as well as the player, have to have a solid and catchy soundtrack that does not feature vocals (unless...?) as it exists as a focus in the game, and feature a unique eye-catching visual style to match the choice of audio and gameplay.
- *Beat em' up*: Use of animation/visuals to give the game a specific feeling/appeal, a focus on gameplay without sacrificing the level of attention that narrative requires, and combining a variety of elements in order to support the visuals (i.e. audio, haptics, camera manipulation, etc).
- *Rogue-like/lite*: A high level of polish on elements that will inevitably be seen over and over, a unique visual style to sperate themself from the large level of competition, a reason to continue playing even if the player reaches the 'end', and a variety of equipment or characters to again increase replayability.



## Target Demographic

### Type of Player:



*Figure 2 – Bartle's Taxonomy, applied to BPM.*

Figure 2 depicts the areas in which BPM falls on Bartle's Taxonomy. The player acts on the world by progressing in each playthrough (Achiever), they interact with the world by exploring each stage and having dialogue with NPCs (Explorer), and they interact with other players with the potential for co-op features (Socialiser). I used the red X to demonstrate where the focus of the game lies, this does not predetermine the game's direction, instead it allows the player's that may be interested in this concept to be identified.

### Age Rating:



Figure 3 – PEGI rating system.

The PEGI rating system as shown in Figure 3 uses both age ratings and content descriptors to make clear the type of game the consumer is buying, obviously a lower age rating will make it accessible to more players. However, if a game makes too many compromises in the pursuit of a lower age rating, they may end up losing out on the mature market which again is obviously larger than the under 18 group.

Using the PEGI system, we can deduce that a rating of 18 would not serve any purpose to further the game as it does not feature graphic sexual content or any other 18 rated content descriptors. On the other hand, ratings of 3 and 7 would be far too limiting in crafting a mature and serious narrative, being unable to include such content as gambling or bad language.

Whilst there are a few dividers between 12 and 16 rated content, the main one that it comes down for BPM is drugs, a twelve cannot “contain references to illegal drugs or a fictional substance that has parallels to real-life illegal drugs”. I conclude that a rating of 16 will be more beneficial in this case as it frees up the opportunity to use drugs (fictional or otherwise) in character design and item design.

### Platform Selection:

- **Nintendo Switch:** The switch has fantastic features such as portability and has built a reputation as highly accessible to the casual market. Also, the support they give to indie games goes above and beyond their competitors. Unfortunately, Nintendo has a highly strict quality control system that would make it difficult for a first-time developer to publish on the platform.
- **Xbox & PlayStation:** Whilst these consoles are the most popular, especially in the West, they are more focused on the success of AAA titles and show less regard for the indie scene. Also, these consoles make high end gaming affordable in comparison to a top of the line PC, so the largest market they attract are younger and only interested in popular games.
- **Mobile:** Mobile is the highest grossing platform there is, with mobile phones being a necessity in the modern era and mobile gaming as the name suggests is highly portable and can be done anywhere for any amount of time. This being said, due to the type of fast casual player this attracts games released must be fast and easy to stop and start whenever.
- **PC:** With options like Steam and Itch.io, this platform is the obvious choice for an indie start-up.

## **BPM USPs**

### **Unique Combat Style in a Rogue-lite Setting:**

- The rogue-like/lite genre is popular for its versatility. However, despite this there is no other game like this on the market.
- In fact, there are no well known or successful 3<sup>rd</sup> person rhythm-based beat em ups. So there is certainly a gap in the market for a title like this.
- This point alone would be enough to attract players.

### **Intriguing Characters:**

- A variety of unique characters, each with their own backstories, motivations, and style of fighting.
- Character designs will be heavily inspired by their connection to music and as well as their cultural influences.
- If done correctly, original and attention-grabbing characters can really invest a player in the game and its lore, making this a great USP.

### **Original Soundtrack:**

- This game will boast an original soundtrack with multiple tracks for each area.
- Each track will be inspired by the history of music in that area of America, which if done correctly can be one of the biggest selling points of all.
- Each area will have a base track for encounters in the exploration stage, and then a more powerful and iconic boss fight track.

### **A Simple and Intuitive Core Gameplay Loop:**

- With a simple core gameplay loop, it means anyone can pick it up and easily get into it. This was one of the big selling points that brought hit shooter *Overwatch* (Blizzard Entertainment, 2016) its massive success.
- With such simple yet dynamic combat systems, the gameplay could be successful with either a PC or console adaptation.
- With the market having an increasingly smaller attention span and the demand for instant gratification at an all time high, there has never been a better time for an intuitive game to release.

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