

Axie Infinity War

Game Design Document (MVP)

Jeremy Pernesz

08.06.2022

—

One Page info sheet

Game Title

Axie Infinity War (AIW)

Short Description

Axie Infinity War is a 2.5d Platform Battle Royale Game. Where 10 players fight each other for the ultimate glory and exciting rewards.

This is a game that enables the Axie community to try a completely new genre to test their gaming experience using Axies and SLP.

AIW aims to be one of the most exciting mini games from the Axie builder's program.

[Builders Program: The First Projects Accepted! - by Philip]

Genre

MOBA Platform Battle Royale

Ship Date

Playable Demo End of July 2022

MVP (Tech Demo) Q4 2022 - Q1 2023

Table of Contents

Game Title 1
Short Description 1
Genre 1
Ship Date 1
Table of Contents 1

0. Overview 4
0.1 Core Concepts 4
0.2 Target Audience 4
0.3 Design Elements MVP 5
0.4 Design Elements Playable Demo 5
0.4 Platform Support 6
0.5 Gameplay and controls 6
0.6 Camera 7

1.Gameplay 7
1.1 Gameplay Flowchart 7
1.2 Describing a sample of gameplay. 7
1.3 Gameplay sample : 8
1.4 Map Example : 8
1.3 Provided Assets. 9
1.3 Technology Stack. 9

2. Stories 9
2.1 Storyline structure 9
3.2.1 Overview 10

4. Endgame 10

5. Microtransactions 10

6. Economy and Loot 10
6.1 Economy 10
6.2 Items 11

7. Input 11

8. Movement Details 11

8.1 Standard Movements 11
8.2 Jumping 11

9. Powers 12
9.1 Special Moves 12
9.2 Goals of the power system 12

10. Environmental Interactions 12

11. Combat Details 13
11.3 Health & Damage Calculations 13
11.5 Hits and misses 15

12. User interface 15
12.1 Login Screen 15
12.3 Game Chat System 16

13. Social (Stretch Goal) 16

14. Marketing 16

15. Requirements 16

16. Appendix 17

17. Stretch Goals 18

18. Additional Brainstorm List 18

19. References 19

0. Overview

0.1 Core Concepts

Title: Axie Infinity War

Logo: See right >>>>

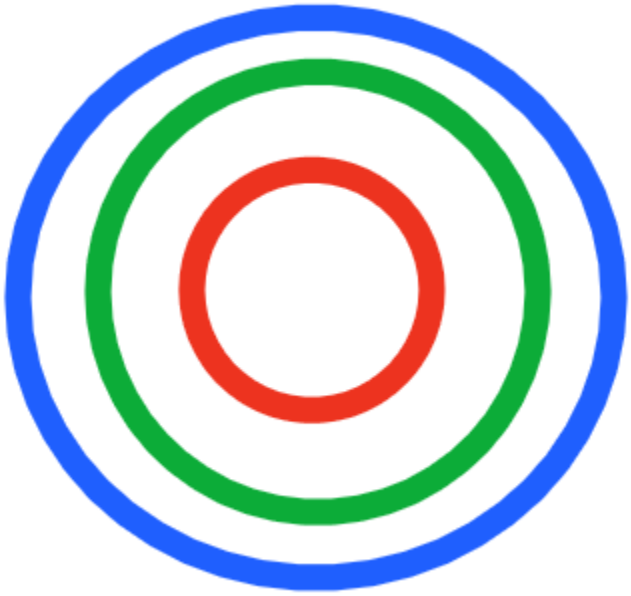
Genre: Platform Battle Royal

Rating: PG

Release Date: Q1 2023



0.2 Target Audience



Primary: Existing Axie Infinity Players.

Secondary: Fans of platform battle royal games.

Tertiary: will be discussed with the marketing team

0.3 Design Elements MVP

The design elements are intended to be simple and effective things that leverage existing Axie Infinity resources, this includes but is not limited to; Axies, tokens such as SLP, certain artwork, especially any available community artwork that may be suitable in quality.

Designed to bring the “Next Level” of fun, rewards, and immersion to the existing PvP Arena battles. Real-time battles are fought, instead of the traditional turn based Axie Infinity combat system.

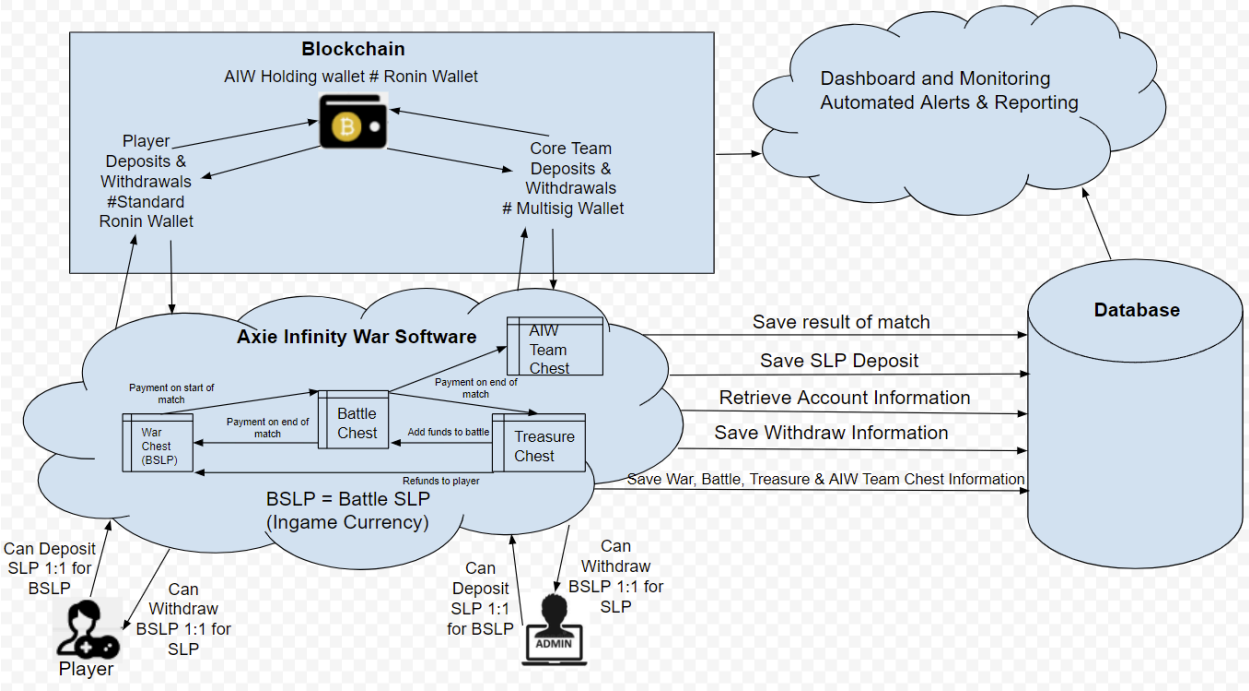
- MOBA (Multiplayer Online Battle Arena) - 10 player battle royal.
- Uses the SLP (Smooth Love Potion) token for in-game currency. This is held in a central blockchain wallet and any deposits of SLP are converted 1:1 into BSLP (Battle SLP), which is an ingame currency, and not Blockchain (to reduce transaction fees for battle entry and marketplace purchases).
- Art theme based on Axie Infinity.
- Axie classes based on Axie Infinity 4 classes are to be used for the MVP - Plant, Aquatic, Bird, Beast, (needs to auto update as Axis Infinity makes updates to Axie’s and Classes, API to be provided).
- Custom Axie body part modifications and combat/movement animations.
- BSLP and Item drops.
- Individual battle entry fees, with % paid to the winners.
- Rewards for every battle.
- Public leaderboard lists
- Game Treasury
- Website allowing automatic payment, also allowing players to login using their Ronin Wallet and existing Axie Infinity account.

0.4 Design Elements Playable Demo

- Rest API interaction for
    - Axie information (if player doesn’t have the class, match next best class)
    - SLP/BSLP in game economy
- Security feature that won’t let others overwrite the game code.
- MOBA (Multiplayer Online Battle Arena) - Between 5 & 10 players.
- Art theme based on Axie Infinity.

- Axie classes based on Axie Infinity 2-4 classes - Plant, Aquatic, Bird, Beast, (needs to auto update as Axis Infinity makes updates to Axie's and Classes, API to be provided).
- Item drops.
- Public leaderboard lists

High level overview of Blockchain & AIW game software topology for Play & Earn mechanics (UML Diagrams being created)



0.4 Platform Support

Mobile (Android) although web 3.0 is of special interest and would also be considered for MVP but not for the first playable demo milestone. For MVP it is preferred the minimum number of platforms supported would include all platforms Axie Infinity operates on.

0.5 Gameplay and controls

Where possible similar controls to Axie Infinity should be used, however as this game is real time not turn based, there will need to be some new controls introduced to the player.

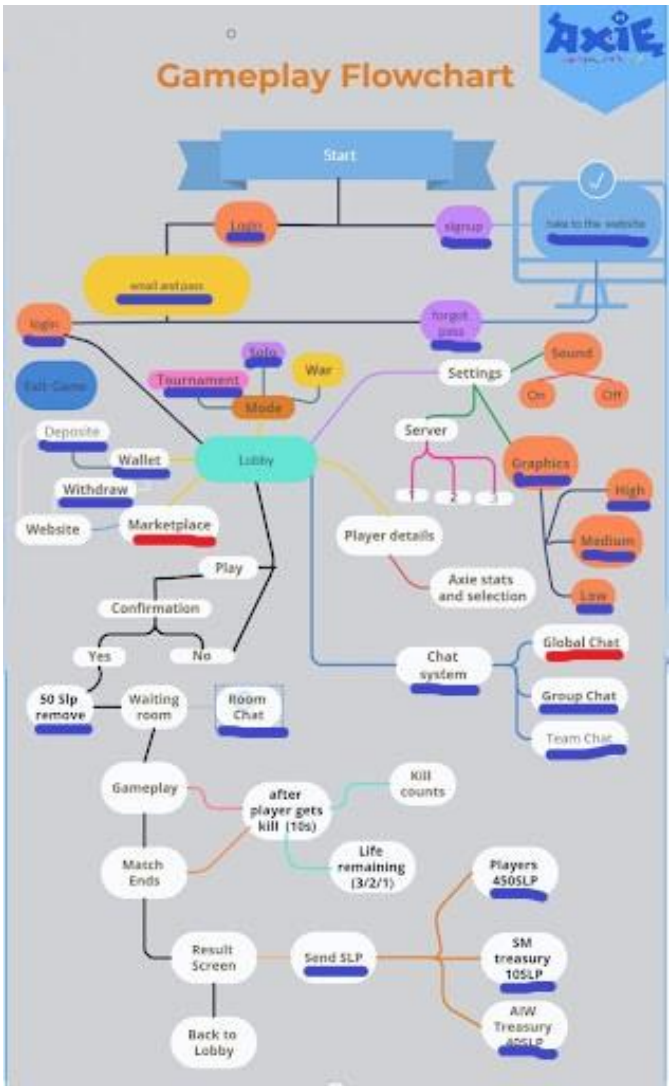
Gameplay will be similar to games like Super Smash Brothers, Brawl Stars , Mini Militia, Tiny Troopers 2.

Players start in a lobby area and join a waiting list for a battle in war mode (5vs5) they can invite others. Once enough players (10) have joined they transition to the Arena where the battle begins. At the conclusion of the battle, players are sent to a results screen and presented with statistics for the battle and the distribution of BSLP to players, then they are returned to the lobby.

Red = MVP Stretch Goal | **Blue** = Applies to MVP (not playable demo)

0.6 Camera

This is a 2.5D game, the camera is fixed to a set size around the player and can be zoomed out with the scale of 2x.



1.Gameplay

1.1 Gameplay Flowchart

(See right) NOTE diagram shows some things not covered in the MVP (E.g. the marketplace)

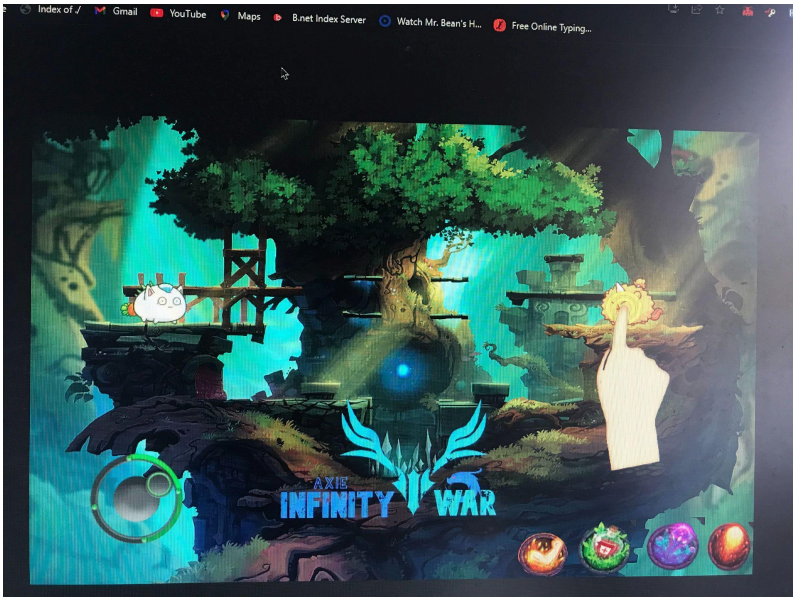
1.2 Describing a sample of gameplay.

After starting a match, 10 players will spawn on the map in different locations. They will fight until the last Axie remains. Players will attack using their 2 types of attack abilities, one is normal attack which will give decent damage (varies depending on the axie class), and will need 4-7 attacks to kill the opponent. There is also an ultimate attack which will be available after 3-4 successful normal attacks. Ultimate attacks do high damage, at least x1.5 to x3 more damage than a normal attack. The player can use their shield by double tapping on the Axie (quick tap, no hold), which will give them an extra little bar with a shield (absorbs 100-150 damage). The game's movement controls work via a screen based joystick on the left, with attack buttons on the

right. The player can also tap the screen to interact with it instead of using the buttons on the right. Easy to learn but hard to master attacks, for example players might have to use leading shots (like in skeet shooting) to hit the opponent, as opponents will be moving and jumping around. The speed of the Axies depends on class, some will have a bias towards speed, and others will have a bias towards powerful attacks. Some Axies will also have the abilities to heal themselves. Healing can also be completed by using items found at different locations around the map. All of the players will fight for glory and reward! The top 5 among them will receive rewards that exceed the entry into the battle arena.

1.3 Gameplay sample :





Links: Video sample

Reference games :

BULLET LEAGUE | Gameplay

Axie Infinity: Origin - Official Gameplay Trailer

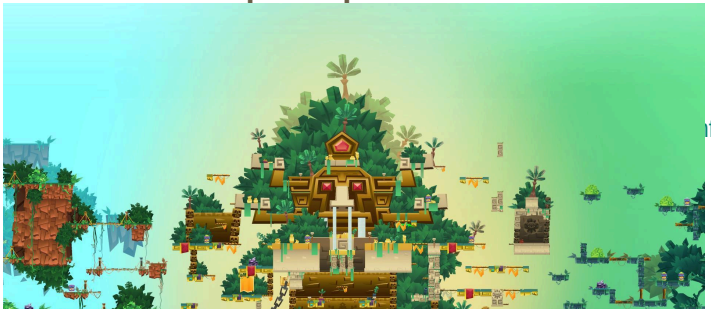
Doodle Army 2 : Mini Militia Fan Made Official Trailer

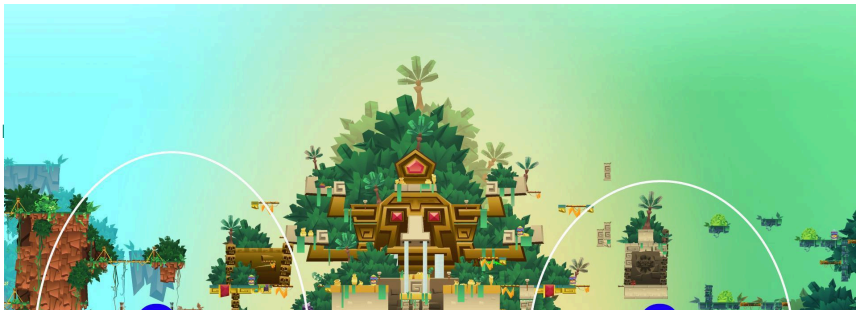
Tiny Troopers 2 - Google Play Trailer

Brawl Stars Gameplay Trailer - Android Games on GplayG

Super Smash Bros. Ultimate - Available Now! - Nintendo Switch

1.4 Map Example :





HD Link: Map

1.3 Provided Assets.

This is a list of existing Game Development Assets the AIW team will provide for the MVP.

- Axis
- Animations
- Other artwork can be sourced/provided as required.
- There are multiple developers on the AIW team familiar with Unity, who are willing to put in their time anywhere it may be of assistance. This would need to be further scoped.
- Map
- Website + Domain
- APIs for website and blockchain interaction
- Database
- Various Unity Assets (all high quality assets)
- Basic code for 2D platformer (Provided via the Thomas Brush Full Time Game Dev course (supposedly clean code).
- Balancing Document: https://docs.google.com/document/d/1rMqTCISwpyRSQyeGPUq5WUn1Ytm1zoDMYymCi37IcbE

1.3 Technology Stack.

- Unity
- PUN2
- Insert webdev tech info (Being developed by Unchained Tools who are part of the AIW team)

2. Stories

2.1 Storyline structure

We intend on running a competition within the Axie Community for the storyline/s. A reward on offer, that will kickstart the winner with special/rare items and Axie upgrades.

3.2.1 Overview

Missions
Daily/weekly missions encourage people to login each day:

- Item drops.
- Training missions to introduce new players to the gameplay and control elements.
- Special upgrades that are not available in the marketplace (Stretch Goal for MVP)
- Spin the Axie (spin the wheel) with special items and skins (Stretch Goal for MVP)

4. Endgame

There is no “End Game”, just the end of each battle or season.

5. Microtransactions

Players will pay 50 BSLP as an entry fee for every match, after the match ends they will be rewarded based on their positions.

Players will use their BSLP to buy items and cosmetic upgrades to make their beautiful Axies more gorgeous. Real life merchandise will also be added to the marketplace later, especially season based merchandise.

6. Economy and Loot

6.1 Economy

The Game Treasury can be used for (but is not limited to):

- Marketing
- Competition prizes
- Development costs.

Each battle operates with a mandatory entry fee, with an option that allows the AIW team to give players free entry, filling the 50 BSLP fee from the Game Treasury instead of the player's wallet (War Chest).

Loot comes in the form of items and visual upgrades (special attack animation etc). These can be used by the player.

6.2 Items

Items will be added over time, initially they will consist of:

- Health kit
- Flying kit
- Speed boost.

7. Input

- Mobile & Tablet (Android) (Only this for Playable Demo)
- PC, Mac, and IOS.

8. Movement Details

Controls: Direct interaction via Single tap on the enemy for a normal attack, tap and hold (3sec) for the ultimate attack; attacks won't trigger until the finger tap releases, single tap (Or maybe a swipe pattern) on your Axie for shield, double tap for heal.

8.1 Standard Movements

Left and right movement, with dash moves with virtual joystick on screen. Aim movement based on touch and fingers movement, or buttons on screen.

8.2 Jumping

Players can jump using their dash movement button (or maybe joystick). They have to flick the movement button upwards once to use normal jumps . and it will allow Axies to move on higher locations of the map .

9. Powers

9.1 Special Moves

Attack:

- Primary Attack.(Normal attack)
- Secondary Attack 1.5x (Ultimate Attack).

Defence:

- Shield.(equal to 100 health bar)
- Heal.(70 health)

Ultimate Attack:

- Excluding the primary attack other skill/moves will have a time cap or based on how many successful attacks have been given, once the time cycle finishes or then bar fills with successful attack xp, the special power can be used and the time cycle /attack xp restarts.(**still to be discussed**).

Passive:

- Items, drops and consumables will give passive bonus to speed, health, armour, and power.

9.2 Goals of the power system

To introduce more strategy, and to be able to utilise skills and abilities that the players are used to from their Axies in Axie Infinity.

10. Environmental Interactions

There will be a basic screen shake (and haptic feedback) on certain power/special moves.

11. Combat Details

In game combat style is discussed in **1.2 Describing a sample of gameplay.**

And other details about axie combat power will be given below(damage variations and health)

11.3 Health & Damage Calculations

Axies will have 9 main class and elements but we will focus on 4 classes for the MVP.

* BIRD CLASS- Wind element

* BEAST CLASS - Fire Element

* AQUA CLASS- Water Element



* PLANT CLASS- Plant Element

1.Bird class (360 hp)

Ability :
Shield : 80 (40Sec)
heal :90 Hp (50Sec)

Bird class damage

Bird>beast = 45 hp per normal attack & 90hp (30x3 nearby 3 axies or 90 on 1 axie) on ultimate attack

Bird>aqua = 45 hp per normal attack & 90hp (30x3 nearby 3 axies or 90 on 1 axie) on ultimate

Bird>plant = 45 hp per normal attack & 90hp (30x3 nearby 3 axies or 90 on 1 axie) on ultimate

2.Beast class (390 hp)

Ability :
Shield : 80 (40Sec)
heal :90 Hp (50Sec)

Beast class damage:

Beast> Bird = 45 hp per normal attack & 120 on 1 axie ultimate attack

Beast> Aqua = 45hp per normal attack & 120 on 1 axie ultimate attack

Beast> Plant = 45 hp per normal attack & 120 on 1 axie ultimate attack

3. Aqua class (420 hp)

Ability :
Shield : 90 (40Sec)
heal :120 Hp (50Sec)
Aqua>Beast= 40 hp per normal attack & 80hp (40x2 nearby 2 axie or 80 on 1 axie) on ultimate attack

Aqua>Bird= 40 hp per normal attack & 80hp (40x2 nearby 2 axie or 80 on 1 axie) on ultimate attack

Aqua>Plant= 40 hp per normal attack & 80hp (40x2 nearby 2 axie or 80 on 1 axie) on ultimate attack

4. Plant class (520hp)

Ability :
Shield : 150 (40Sec)
heal :150 Hp (50Sec)

Plant>Bird = 35 hp per normal attack & 70 on 1 axie ultimate attack

Plant>Aqua = 35 hp per normal attack & 70 on 1 axie ultimate attack

Plant>Beast = 35 hp per normal attack & 70 on 1 axie ultimate attack

N/A**11.4 Speed**

* BIRD CLASS- 1.25x

* BEAST CLASS - 1

* AQUA CLASS- 1

* PLANT CLASS- 0.75x

11.5 Hits and misses

(will be discussed later with developer team)

12. User interface

12.1 Login Screen

Animated Background with simple login and signup buttons.

12.1 Lobby

The game lobby allows players to access/view:

- Play
- Mode:
    - Solo

    - War
    - Tournaments
- Settings:
    - Sound
    - Graphics
    - Server
- Player details:
    - Axie stats and selection
- Wallet
- Leaderboard
- Chat system

12.3 Game Chat System

During battle, a radial chat system similar to Rocket League & 8 ball pool, that uses pre-set comments. This allows quick communication, and also stops abusive language and bullying during battle.

13. Social (Stretch Goal)

At the end of the battle when the statistics are shown, there should be the ability to post a picture to social media (Facebook, Instagram, Discord, insert others).

14. Marketing

The Sky Mavis team will be engaged and assist with marking to the Axie Community.

15. Requirements

Software and hardware requirements will be discussed with the developer team for best performance on all kinds of android devices.

Hardware	Description
Mobile/tablet	This needs to follow a similar spec to Axie Infinity so all existing players

	can be included.
PC/Mac	This needs to follow a similar spec to Axie Infinity so all existing players can be included.

16. Appendix

Item / Object	Description
1.health kit	A Heath kit is a rare item that will increase health 180 hp . it's going to spawn/be found in random locations on the map .
2.Flying kit	The flying kit is a rare item that will let axies fly for 1 minute . it's going to spawn/be found in random locations on the map .
3. Speed boost	The speed boost kit is a rare item that will let axies move 1.5x faster for 60 seconds . it's going to spawn/be found in random locations on the map .
4.teleportation booth	There will be 3/4 teleportation booths on the map on some fixed locations . that will let the axies to move one place to another place on the map instantly .
5. Player spawn spot	There will be 3 different blocks in the map where players will spawn in the beginning of a match. 10 people will spawn in 10 different locations . 3 people in 3 different blocks of the map and one person in the middle. (shown in the example map)
6. Match time	Solo mode matches will be 9 minutes
7. Zone system	In every 1 minute the zone will shrink and the zone will give 5hp damage on the first zone and after every zone the damage will increase 5 more hp . like . 1st zone = 5 hp damage per 2 seconds 2nd zone = 10 hp damage per 2 seconds 3rd zone = 15 hp damage per 2 seconds 4th zone = 20 hp damage per 2 seconds 5th zone = 25 hp damage per 2 seconds 6th zone = 30 hp damage per 2 seconds 7th zone = 35 hp damage per 2 seconds 8th zone = 40 hp damage per 2 seconds

	9th zone = 45 hp damage per 2 seconds And in every minute the damage zone size will decrease by 10% of the whole map size . (in circle)
8.Victory emote	After a match ends , the winner will be able to display a victory emote
9.life	Every player will have 3 lives in a game . They can die 3 times for the final result and the 3rd one will be their final death .
10. Solo mode	Players will have 3 lifespawns . like if a player dies he can respawn in 10 seconds for two times more . That means a player will get a total 3 life in a match .. and will be spawned in a random location .
11. War mode	Same as solo mode but the teams will only spawn/respawn 2 poisons on the map (opposite end of the maps) , they will have 3 lives each and the last (3rd) death will be their final death . To win a 5vs5 match , a team has to kill the other team completely (counting all 3 deaths).

17. Stretch Goals

The ability for players to be able to create their own arena maps. There should be an approval process, whereby senior players vote to accept or reject the map before it's placed into production.

- Marketplace
- Global Chat System
- Destructible Environments
- Visible damage to Axies
- Special upgrades that are not available in the marketplace (Stretch Goal for MVP)
- Spin the Axie (spin the wheel) with special items and skins (Stretch Goal for MVP)

18. Additional Brainstorm List

- Tournament
- Story Mode

- 9 class.

19. References

- Axie Developers Codebook: https://cookbook.axie.live/developers-cookbook/introduction
- Axie Infinity classic/ Origin
- Bullet league
- Super Smash Brothers
- Brawl Stars
- Mini Militia
- Tiny troopers 2.