



Sync & Ecco

Game Design Document V1.3.0
Basalt Formations

Version History

Version	Date	Editor	Notes
0.1.0	22/07/2024	Brodie	<ul style="list-style-type: none"> Set up document and included an overview
0.1.1	22/07/2024	Kian	<ul style="list-style-type: none"> Added game pillars Updated game overview Added basic gameplay description Added basic narrative and story
0.1.2	23/07/2024	Kian	<ul style="list-style-type: none"> Added character section under mechanics Added enemy section under mechanics Added level design brief Added UI elements Updated narrative Added basic controls
0.1.3	24/07/2024	Kian	<ul style="list-style-type: none"> Edited level design by adding more info on how levels will work Added Core Game Loop + Enemy Combat Loop Added extra info on character kits Added controls infographic
0.1.4	25/07/2024	Kian	<ul style="list-style-type: none"> Added an ability idea to the Bruiser Minor adjustments to the level design details
0.1.5	29/07/2024	Brodie & Kian	<ul style="list-style-type: none"> Updated character sheets Updated game flow
0.2.0	30/07/2024	Brodie	<ul style="list-style-type: none"> Updated gameplay Updated overview Updated characters Added healing & death mechanics w/ diagram Added sound info Added references Added resource management section
0.2.1	31/07/2024	Brodie Kian	<ul style="list-style-type: none"> Updated character sheets Updated ability list Updated Audience section
0.3.0	5/08/2024	Brodie	<ul style="list-style-type: none"> Enemies updated Abilities integrated Environmental hazards/puzzles added
1.0.0	6/08/2024	Brodie	<ul style="list-style-type: none"> Abilities, enemies, and hazards finalised for v1 Characters and game named
1.0.1	12/08/2024	Kian	<ul style="list-style-type: none"> Reformatted healing ability and game-flow sections

1.1.0	12/08/2024	Brodie & Kian	<ul style="list-style-type: none"> ● Updated visuals ● Updated audience ● Updated elevator pitch (from pitch presentation) ● Updated pillars ● Character ability revision ● Healing ability revision ● Enemy spawning ● Expanded on smart & brute enemies ● Game flow and level design revision were reduced into one section. ● The modular tile system is updated ● Hazards, interactives and level objectives are now stated without contradicting points and made clearer ● Touched a little bit more on the audio
1.1.1	13/08/2024	Kian	<ul style="list-style-type: none"> ● Updated Environmental hazards/puzzles section
1.1.2	14/08/2024	Brodie Kian	<ul style="list-style-type: none"> ● Removed shield ability from Ecco ● Removed semi-fire from rail gunner ● Update enemy sections with new horde types ● Updated Target Audience section ● Moved environmental hazards into level section
1.2.0	14/08/2024	Brodie	<ul style="list-style-type: none"> ● Updated how Sync's attack mechanics work. ● Added graphs for Sync and Ecco attack values. ● Updated how Ecco's attack mechanics work. ● Updated general character section
1.2.1	15/08/2024	Brodie	<ul style="list-style-type: none"> ● Added graphic for game pillars ● Added logo ● Added detail to stun section under Ecco
1.2.2	18/08/2024	Brodie	<ul style="list-style-type: none"> ● Updated gameplay overview section
1.2.3	20/08/2024	Brodie	<ul style="list-style-type: none"> ● Added gameplay graphic ● Updated water into bollards. ● Updated enemies regarding spawning and stat variation.
1.2.3	20/08/2024	Kian	<ul style="list-style-type: none"> ● Updated UI sections (Menu, HUD)
1.2.4	21/08/2024	Kian	<ul style="list-style-type: none"> ● Updated controls section ● Updated UI section ● Added Synchronise section (revival ability)
1.2.5	27/08/2024	Kian	<ul style="list-style-type: none"> ● Included Engine Camera to display current engine camera settings and zoom ● Updated gameflow to include flowcharts for level gameplay and puzzle solving.
1.2.6	10/09/2024	Kian	<ul style="list-style-type: none"> ● Updated level design section to include elevator as an object ● Updated Sync section to include coop powered shot

1.2.7	17/09/2024	Kian Brodie	<ul style="list-style-type: none"> ● Updated Sync section for railgun charge and refraction shot ● Updated level design section, specifically pressure plates and spikes ● Updated level objective section ● Updated enemies section to include a bit more about their behaviour ● Added UI Mockups for the menu ● Removed settings menu
1.2.8	25/09/2024	Brodie	<ul style="list-style-type: none"> ● Updated camera ● Updated Sync's railgun + movement.
1.3.0	9/10/2024	Brodie	<ul style="list-style-type: none"> ● Updated Ecco movement ● Updated Sync offensive timing ● Cut misfire shot
1.3.1	28/10/2024	Brodie	<ul style="list-style-type: none"> ● Added tutorialisation
1.3.2	6/12/2024	Lochie	<ul style="list-style-type: none"> ● Fixed some spelling mistakes and such



Table of Contents

Version History	2
Table of Contents	5
Game Overview	7
Elevator pitch	7
Pillars	8
Where's the fun?	8
Gameplay overview	8
Ecco (Robot)	9
Sync (Human)	9
Setting and Narrative	9
Audience	10
Target Audience	10
Similar Games	11
Gameplay	14
Mechanics & Features	14
Camera Angle	14
Engine Camera	15
Playable Characters	17
Resource Management	17
Ecco	18
Sync	21
Synergize (Healing Ability)	24
Synchronise (Revival ability) CUT	25
Enemies	26
Enemy 1 (Regular - Horde Melee)	27
Enemy 2 (Regular - Horde Ranged)	27
Enemy 3 (Miniboss - Intelligent Brute)	28
Game Loops	29
Core Game Loop	29
Enemy Combat Loop	29
Gameflow	30
Level Objective	31
Level Design	33
Tutorialisation	35
UI	36
Main Menu	36
Pause Menu	36
Main menu screen	37
Credits screen	38
Level Select Screen	39
HUD	40
Particles	41
Player Feedback	41



Look & Feel	42
Mood Board - Artbible Link	42
Artstyle	43
Sound	44
Combat	44
Sound Effects	44
Music	44
Ambience	44
UI	44
Technical	45
Prototyping	45
Characters	45
Controls	46
Appendix	47
Looming questions	47
References	48

Game Overview

Genre	Co-op, Twin Stick Shooter
Platform	PC
Perspective	Top Down / 2.5D
Mood / Theme	Sci-Fi, Post-apocalyptic

Elevator pitch

"In a world ruled by an AI overlord, a scrappy engineer has built their very own best friend to help turn the tide of revolution! Sync and Ecco take the fight to its origin, Battle through hordes of corrupt AI machinery to end the tyrant's rule."

[Pitch Presentation](#)



Pillars

ENVIRONMENT

An environment that presents several hazards the players must navigate to progress to the end of each level. The environment will encourage the players to explore and try different routes, having interactable elements to find.

ASYMMETRICAL PLAYSTYLE

Each character will feel different and fun. Each character will have asymmetrical characteristics that complement each other.

CO-OP

Focus on teamwork to defeat different types of enemies and navigate through levels.

Where's the fun?

- Working together to combine attacks and navigate levels.
- Work together to defeat several horde-type enemies.
- Defeat the hordes of enemies approaching the players.
- Asymmetrical gameplay between both players, both being equally as exciting!
- Strong refreshing experience on replay.

Gameplay overview

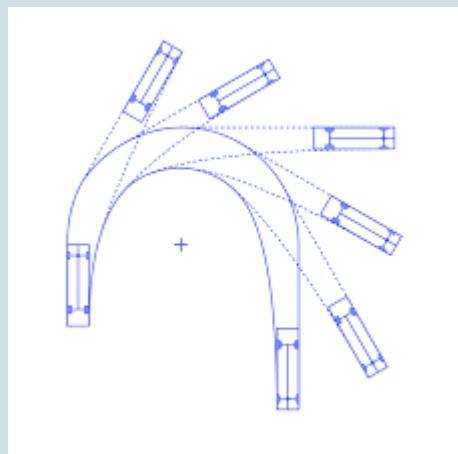
“Sync and Ecco” is a 2 player co-op, fast-paced, twin-stick shooter in which each player must work together to defeat the AI overlord tyrant. Sync, a scrappy human engineer, focuses on high-damage ranged attacks with their shredding railgun. Built by Sync to help turn the tide of the revolution, Ecco smashes through opponents at high velocity with car-like controls, clearing the path and giving Sync a straight shot. With asymmetrical kits, both characters must find their synergy, traverse the hazardous AI engineering tower and defeat hordes of corrupt machinery that oppose their journey.

Ecco (Robot)

- A tankier, melee character who focuses on CC (*crowd control*), and clearing waves of enemies. Their movement will mimic the controls of a car (*larger turn circle*).

Sync (Human)

- A glass cannon ranged attack with various tools to deal high, precise damage. Their movement will be that of a human (*typical video game-style controls*), being able to turn on the spot.



Ecco - Turning circle diagram

Setting and Narrative

A lone human and their robot progress through the floors of an office building, becoming more factory-like the higher they get. This will be in an attempt to destroy the evil AI hive mind at the very top floor. Unknown to the players, it will destroy Ecco, Sync's companion, once destroyed. It will be set in a futuristic, Sci-Fi, post-apocalyptic style of Earth, with several dystopian elements.

Audience

Target Audience

- Couch co-op, casual gamers. (Ideally would be made for the console)
 - This group of players tend to have more social motivation behind playing games, therefore wanting to play more coop-oriented games.
- Any gender, young teens - adults (13-23)
 - This age range tends to be more social (in person) when it comes to games partly due to having more free time, allowing them to play together locally at each other's houses.
- Primary audiences for Sync and Ecco include:
 - Sci-fi fans - The high-tech future setting appeals towards sci-fi fans, especially those who enjoy the post-apocalyptic/dystopian world trope and exploring an almost alternate version of a familiar environment.
 - Twin stick shooter fans - The unique character controls present a new way for players to play a genre they enjoy while having the option to play with more traditional controls adding to the replayability of the game.
 - Co-op fans - The teamwork requirement would appeal to players who enjoy working with other people and playing games socially that involve high amounts of strategizing with each other and communication. It would be popular at venues that provide games for people to play together, encouraging people to engage with these types of games.
 - Bullet Heaven fans - The ability to shred through hordes of enemies appeals to players looking for a power fantasy, addicting and high dopamine release game.
- Economic status, working class.
 - Researching our closest competitor's games, Alienation is sold for \$30 AUD, showing games like this have a market. Alienation made roughly \$4.75 million in revenue, shipping 375,000 units. Our game will be sold for roughly \$19.99 AUD, a bit lower than Alienation due to our games having less content and scope. This lower price range will also allow for our game to be easily accessible to our target market, not financially disturbing people from purchasing the game. Fitting for most of the working class, those who the other aspects of the game appeal to.
 - Due to the custom engine used for the game, it will have low minimum specs and be able to run on lower-end hardware.

Similar Games

Riftstorm (Pre-alpha)



Summary:

Riftstorm is an online multiplayer, co-op, roguelike, twin-stick shooter being developed by Mythic Protocol currently planned to be released in 2025, however, it has had open pre-alpha playtests available to the public.

The game focuses on different character kits with various abilities to use to defeat enemies in arena-type encounters, while progressively gaining upgrades to their character as they progress through a run.

Pros:

- Good graphics
- Good base gameplay

Cons:

- Lacks content
- Boring environment
- Repetitive unlocks

Sales: N/A

Alienation



Summary:

Alienation is an arcade-inspired, twin-stick shooter with RPG elements developed by Housemarque and published by Sony Interactive Entertainment in 2016.

Alienation takes players through a campaign experience in which players can pick from 3 classes, each with their unique attacks and abilities, and will gain experience and grow their character's strength. Additionally, enemies can drop weapons that can be picked up and will completely alter the character's attack, leading to every level playing differently from the last.

Pros:

- Enemy variety
- Replayability
- Progression systems

Cons:

- Repetitive weapons

Sales: 375,000 units sold
\$4.75 million revenue

Helldivers 1



Summary:

A 2015 top-down, twin-stick shooter game by Arrowhead Game Studios.

The players (1-4) must work together in an action-based chaotic cooperative setting and strategically coordinate combat with each other, keeping in mind damaging their teammates to protect SUPER EARTH. Players complete a series of objectives together while choosing their load-outs and positioning to suit their own playstyle and the current objective.

Pros:

- Enemy/objective variety
- Strong coop incentives
- Rewarding upgrades

Cons:

- Average visuals

Sales: 4 million units sold

2.2 million units sold - Steam

\$29.2 million revenue - Steam

Gameplay

Playable Characters

Each character will have unique characteristics and features that focus on different aspects of synergy between their playstyles.

Both characters can move in any direction on the horizontal plane (however their movement styles differ), they do not have any vertical movement.

Each character will have a basic offensive feature, each being completely asymmetrical in how they play.

Each character additionally has a secondary function to their offensive feature, this will be a feature based on the same primary principle of the main attack.

Resource Management

- Ecco will have only one resource, health.
- Sync will have two resources, health and charge.

Ecco		
Resource	Health	n/a
Used when	<ul style="list-style-type: none"> • Activating boost • Health substitute 	n/a
Gained by	<ul style="list-style-type: none"> • Healing ability • Attacking enemies 	n/a

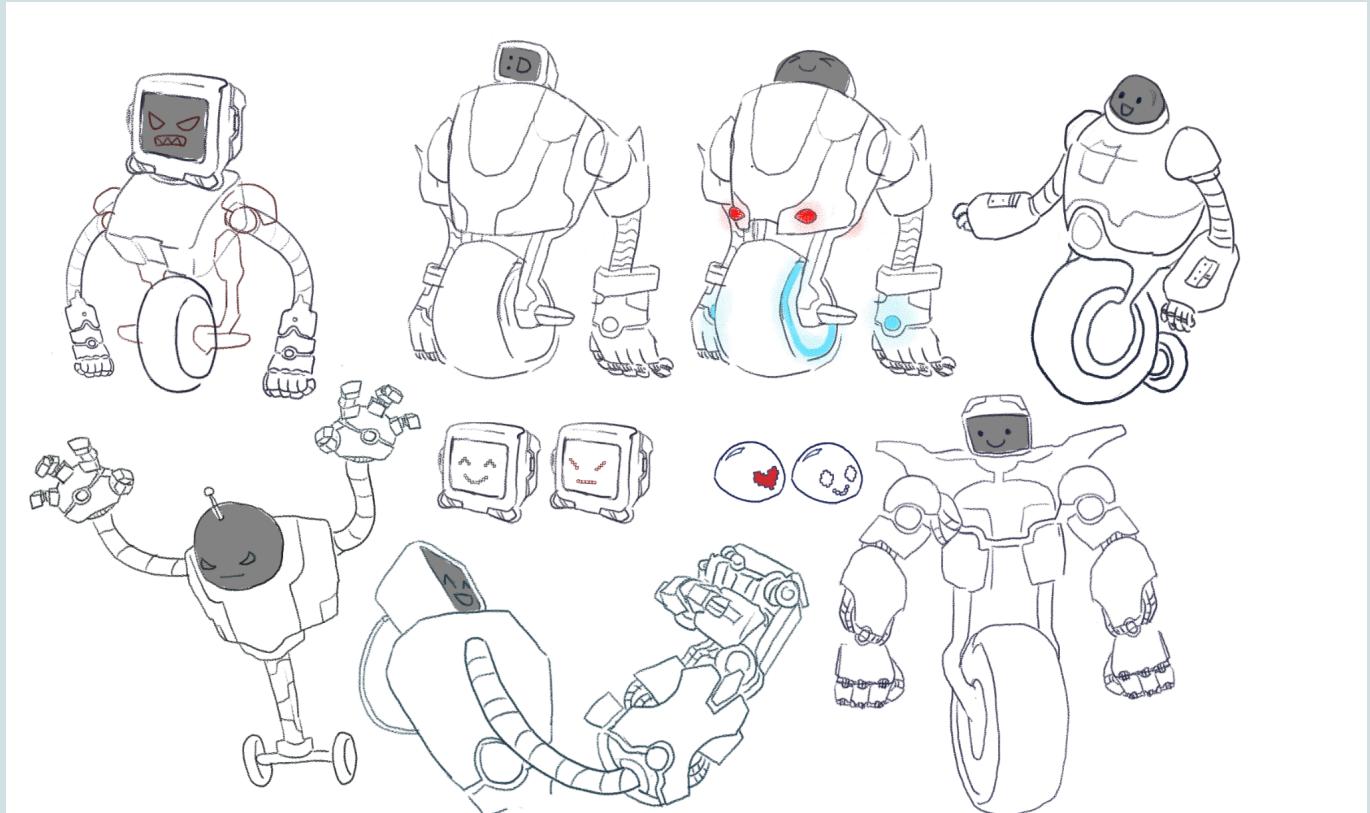
Sync		
Resource	Charge	Health
Used when	<ul style="list-style-type: none"> • Firing railgun 	<ul style="list-style-type: none"> • Player health (when 0 player dies)
Gained by	<ul style="list-style-type: none"> • Holding fire button 	<ul style="list-style-type: none"> • Healing next to Ecco

The resource management with health and energy, are designed like this to further create the asymmetrical gameplay.



Both players have resource management, however, Sync has two simpler resources and Ecco has one more complex resource. Ultimately, they both have the same amount of resource management, it's just presented differently for each character.
Ecco energy to Sync health ratio **5:2**

Ecco



Ecco focuses on controlling the enemies through their CC abilities to provide Sync with some breathing space and some easy shots.

Ecco's movement controls will mimic how a car controls, having to turn in a circle and being able to accelerate (*up to a certain speed*) in the direction they are facing. They can also reverse in the opposite direction they are facing at a slower speed. Their movement will be based on global directional positioning rather than local to the player.

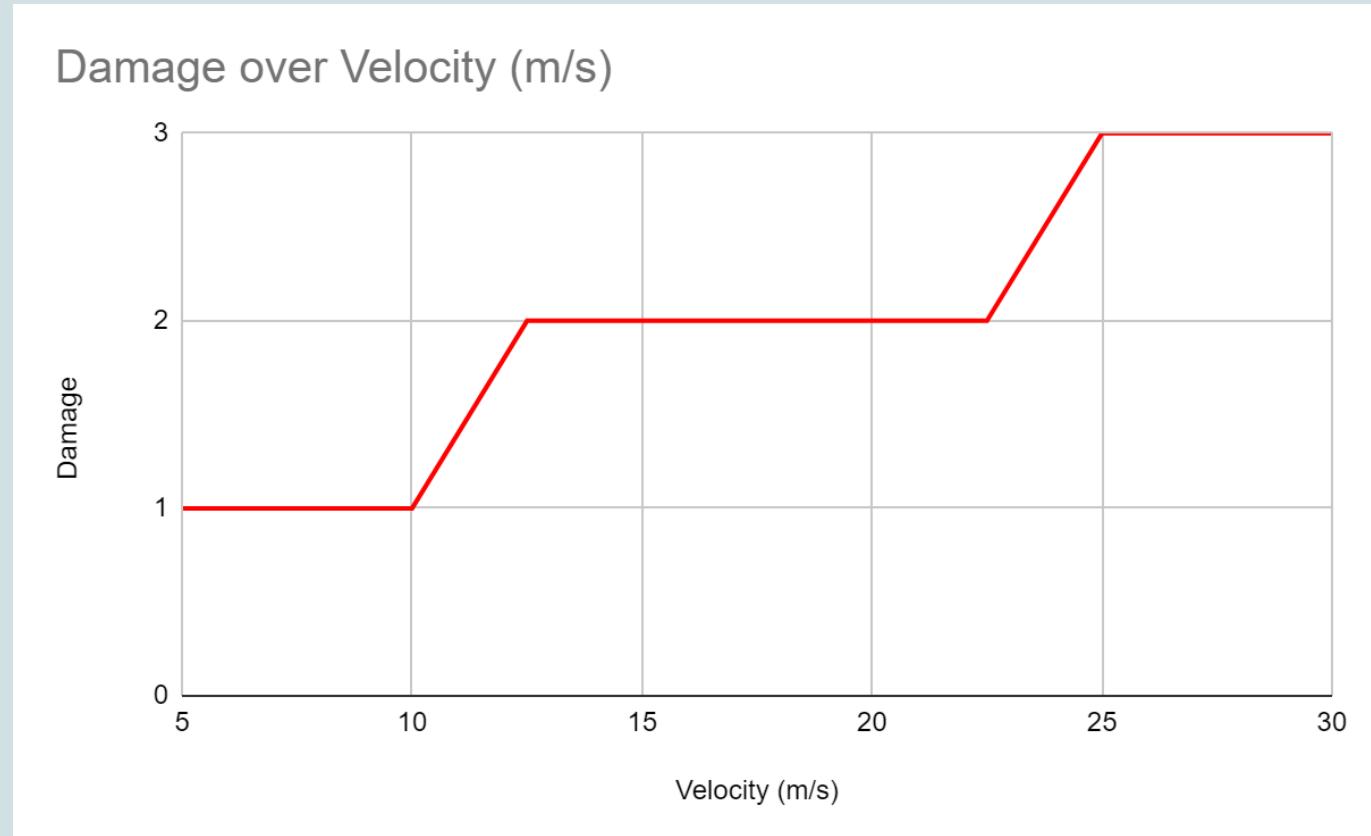
Health

Ecco's health is used as a resource for them to tank hits and to use a boos. Ecco can regain health by damaging enemies. It can also be gained by the shared healing ability. Health is lost when hit and when using the boost ability. If Ecco reaches 0, Ecco will die and the game will automatically restart from the start of the level.

Ecco Offensive

Ecco's output of damage will be driving into enemies at high speeds. The damage will be determined by the amount of velocity Ecco has when colliding with an enemy.

The graph below will show how the damage is determined based on collision velocity. The damage will be separated into 3 chunks, either dealing low, medium or high damage.



Boost

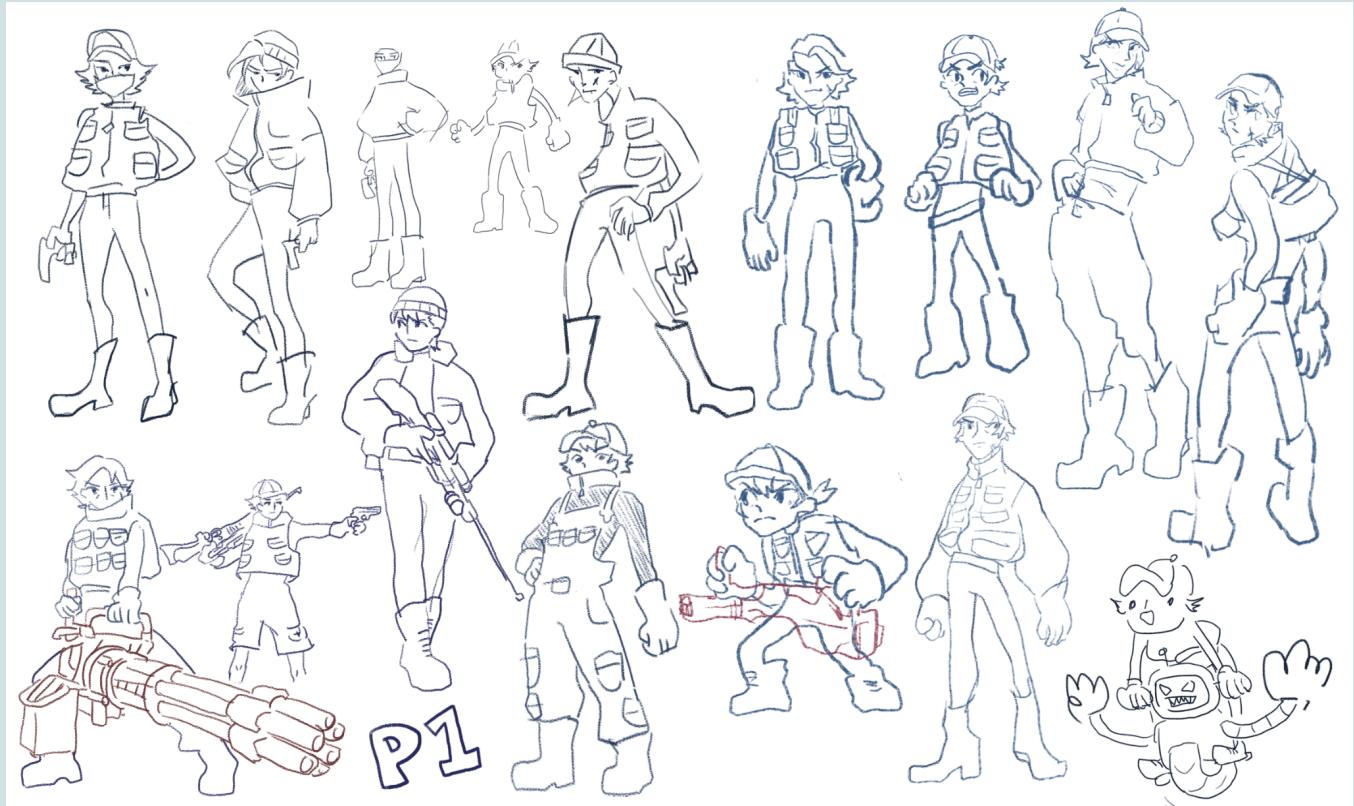
A boost ability that gives Ecco a quick increase in velocity, able to bypass the maximum speed cap if already moving. If stationary, this will act as a dash, giving a boost in speed in the direction Ecco is facing. The boost will cause Ecco to plough through enemies at a high velocity and deal damage accordingly.

Using the boost will deal a small amount of damage to Ecco and go on a short cooldown.

Stun CUT

When colliding with enemies during the boost period, Ecco will stun enemies, leaving them unable to move and attack for 2 seconds. This will be shown visually around the enemy with VFX.

Sync



Sync focuses on **precise** aim with high **single-target** damage output along with a single situational grouped damage option.

Sync's movement controls are more similar to **traditional** twin stick shooters in which the character will begin moving **immediately** at max speed in the direction input **regardless** of the direction they are currently facing.

Health

Sync will have a typical health bar, taking **damage** when hit and **dying** when reaching **0**. This can be regained only by the shared [**healing ability**](#). If Sync's health reaches 0, Sync will **die** and the game will automatically **restart** from the start of the level.

Charge & Railgun

Charge is a resource Sync uses for attacks, it's gained when the **attack button** is held. The charge is used up and set back to zero when **releasing** the button and firing the railgun.

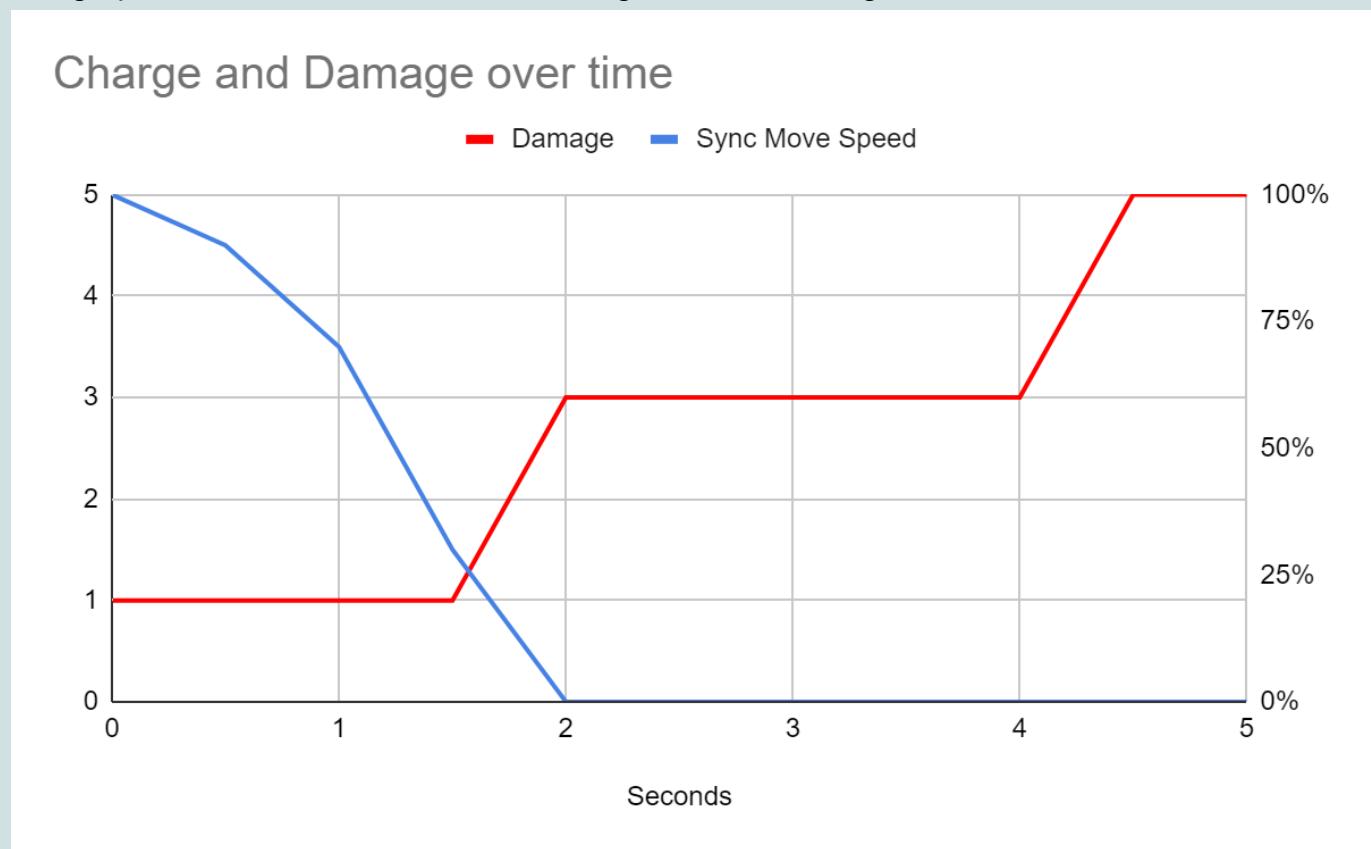
Sync's attack will be based on how much charge was stored before the button is released. Sync will initially be able to move while charging, but will move slower over time until Sync comes to a halt shortly before reaching the **Snipe Shot** charge phase.

The direction of Sync's attacks is determined by the player's right joystick, which aims in the direction the joystick is pushed. (The player will flick in that direction)

When the player starts charging the railgun, Sync's movement will be stopped, forcing the player to only focus on aiming their shot. Once the charge has reached the Snipe, Sync will be completely immobile.

Upon releasing the shot, Sync is unable to move for a short period, with this time being dependent on the type of shot fired.

The graph below will determine the resulting attack after firing a shot.



M = Miss-fire Shot S = Snipe Shot O = Overclocked Shot

Miss-fire Shot (CUT)	Low-damage projectile shot that will be less accurate.
Snipe Shot (1 Second)	A high-damage hit scan shot that will be directly on target.
Overclocked Shot (2 Second)	A high-damage hit scan shot that will be directly on target, gaining pierce and two ricochets.

A **Refraction shot** occurs when Sync fires an overclocked shot that hits Ecco specifically in their back. The shot will split into 3 beams coming out of Ecco's chest at a slight angle variation. If Sync's overclocked shot does not hit the back, nothing will happen and the shot will be stopped on Ecco's character.

Synergize (Healing Ability)

This is a **shared** ability between both players. When Sync and Ecco **both** press the **LB** and **RB** buttons respectively, it will activate. It will **recharge** Ecco's **energy** and **restore** Sync's **health** over time while it is active.

This ability can only be activated while **both players** are within a certain metre **proximity** of each other.

This ability will go on a certain second cooldown once the ability ends after Y seconds, or if the ability is activated by 1 character, but missed by the other.

This will create a healing link between the players as long as they stay near each other. This link will:

- Be shown as a visual link (likely a green beam), between the players on screen. This beam will turn red as the players separate and are nearly out of range for the link breaking.
- Exist until the players separate, or until X time has elapsed.

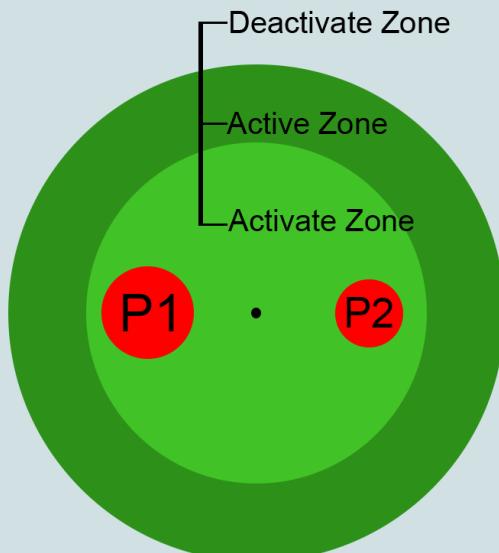


Diagram of healing zone



Synchronise (Revival ability) CUT

While Ecco is down, the [synergise](#) ability is replaced with this one.

This ability is activated the same as [synergise](#) requiring both players' inputs at the same time while near each other.

Similarly to [synergise](#), while this ability is active, Sync must stay within close proximity to Ecco. If Sync moves too far away, the ability will end and will need to be re-activated.

While this ability is active, Ecco's energy will be restored over time, once Ecco's energy reaches a certain point (50%, test), this ability will end and Ecco will be revived. Additionally, while the ability is active, Ecco's revive timer will not decrease.

This ability does not have a cooldown.

Once Ecco is revived, this ability will swap back to Synergize and Synergize will be put on a short cooldown (TBD).

Enemies

There will be **2** types of enemies, some spawning in packs more **frequently** than others, some appearing as a **mini boss-type** enemy.

Each level will start with X amount of enemies **already** spawned, being located in both hallways and rooms of a level. Enemies can also spawn during the level, primarily in enclosed arenas.

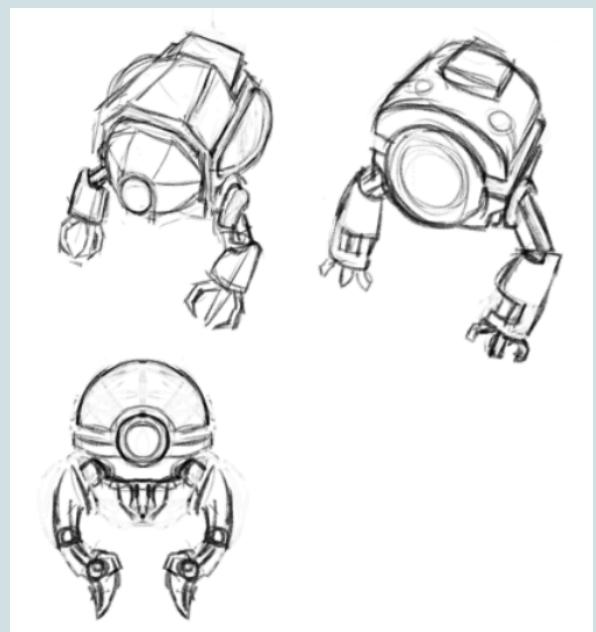
CUT

Both horde-type enemies will have slightly coloured variants, which will be linked to stat increases.

Green	Health +50%
Red	Damage +50%
Blue	Speed +40% (Can only be melee variation) (Increased attack speed, can be either enemy variation) - TEST
Orange	Explode when near the player, only damaging the players. Do not explode on death. (Can only be melee variation).

Enemy 1 (Regular - Horde Melee)

- Low health
- Low melee-based damage
- Moderate movement speed
- Slow attack speed
- Will initially target the closest player when activated.
- Will change target if a player is too close for too long compared to the current target.
- Will perform an attack if a player enters its melee range.
- The melee attack will have a small windup where if the enemy is defeated within the period, the attack will not occur.



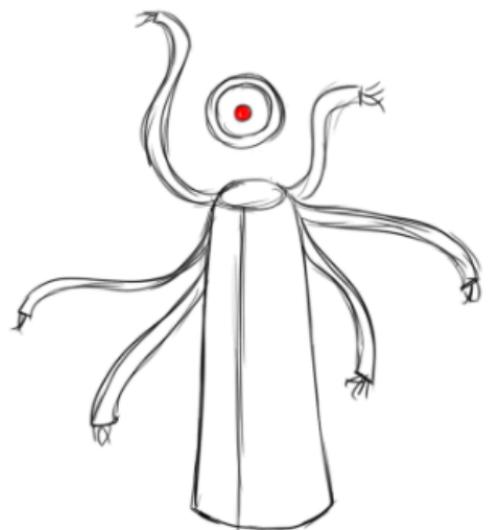
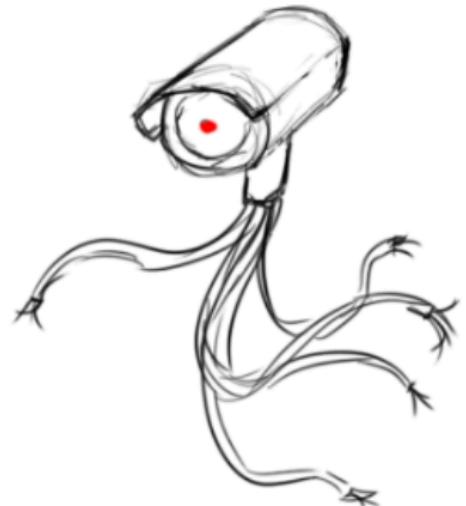
Enemy 2 (Regular - Horde Ranged) CUT

- Medium health
- Low-ranged-based damage, range determines the accuracy of the enemy.
- Moderate movement speed
- Slow attack speed
- Will attempt to keep a certain distance away from the players to attack with their ranged attacks.
- Will initially target a random player when activated.
- Unable to attack while moving.
- Will change its target if the target is out of LoS for too long.
- Will fire projectiles at the target while they are in the enemy LoS.

Enemy 3 (Miniboss - Intelligent Brute) CUT

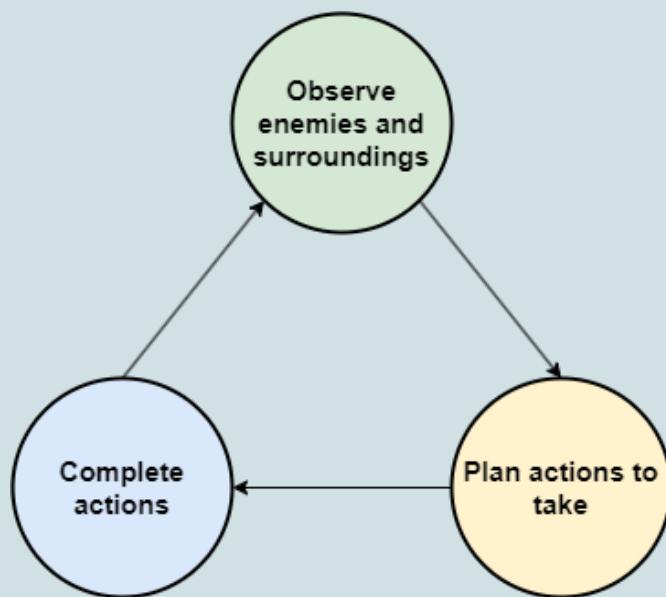
(Stretch goal)

- High health
- Moderate melee-based damage
- Slow movement speed
- Smarter pathfinding will target the players more strategically focusing more on Sync.
- Will surround itself in the horde.
- Slow attack speed, this allows time for Ecco to enter its range to use its ability to stun it before getting hit.
- Can be stunned by Ecco, landing a blow from an ability on the front face of the enemy
- When stunned, this enemy will open its top (for 2 seconds) revealing a vulnerable spot that can be hit by Sync to deal increased damage (*or instantly destroy it*) while it is open.
- Sync's shots can come from any direction to deal with this increased damage.
- If the weak spot closes, Ecco must re-stun the enemy.

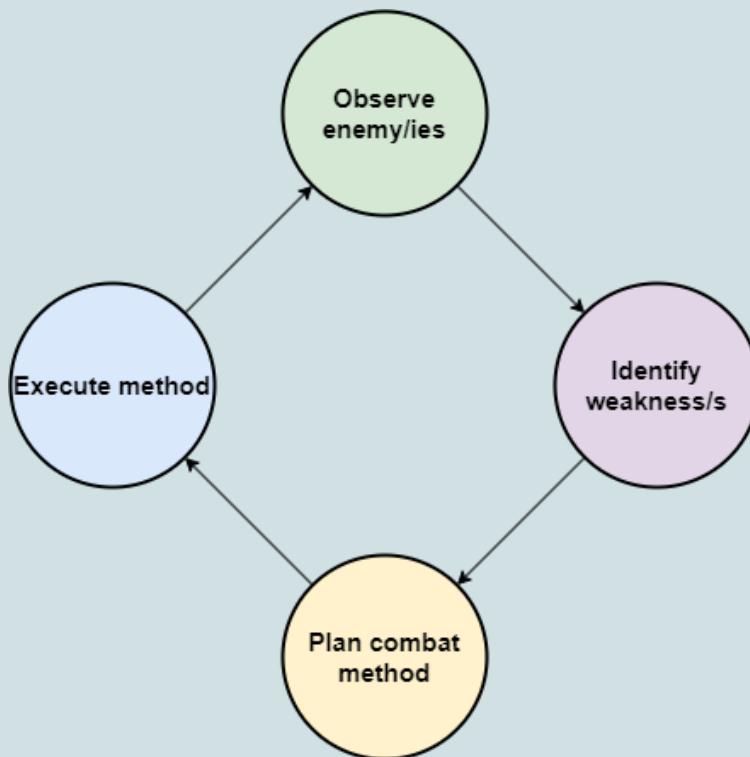


Game Loops

Core Game Loop

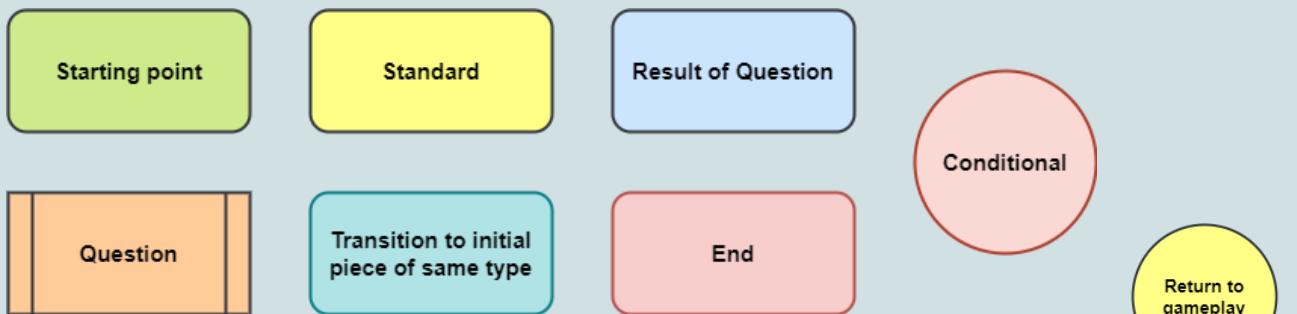


Enemy Combat Loop

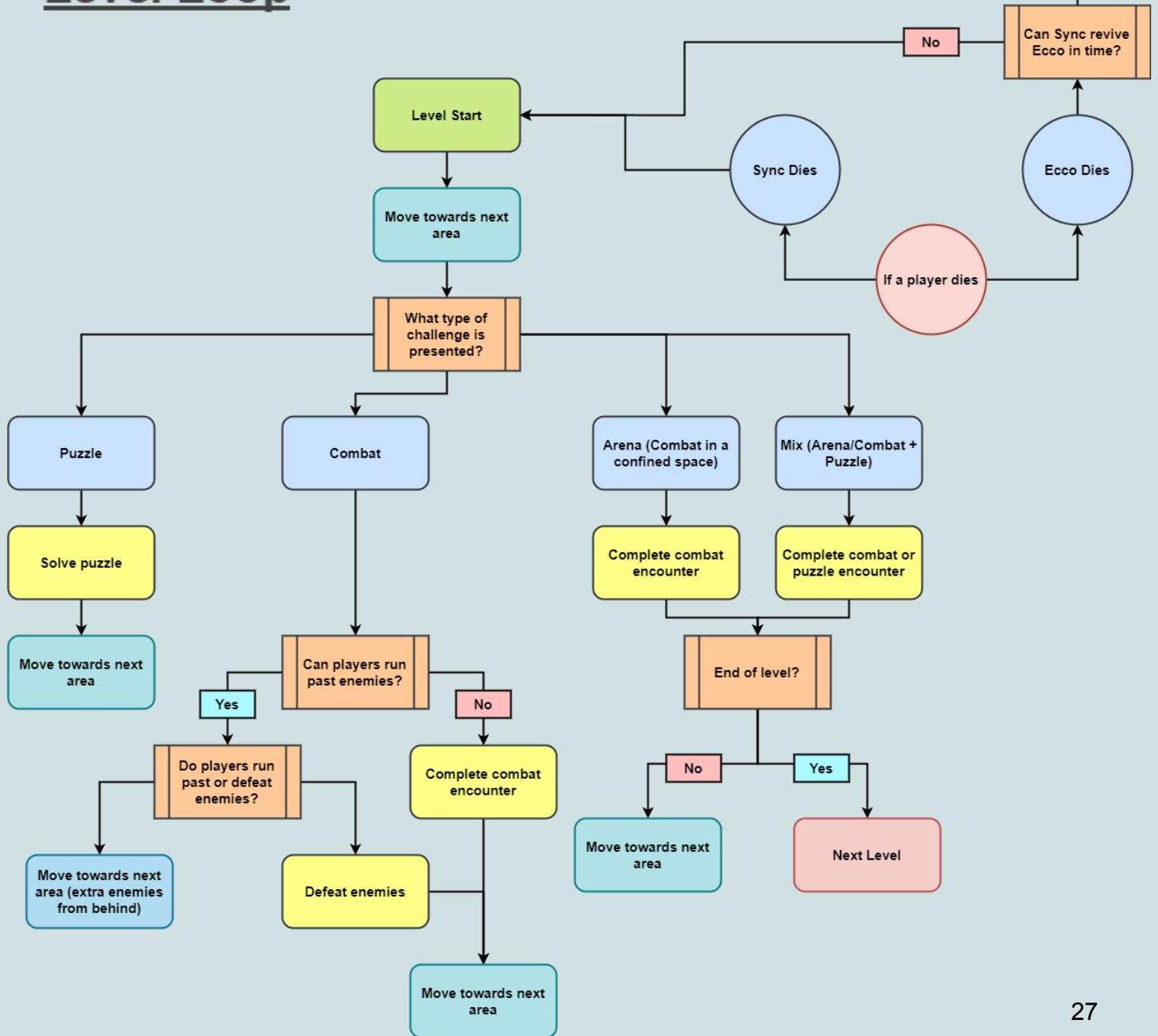


Gameflow

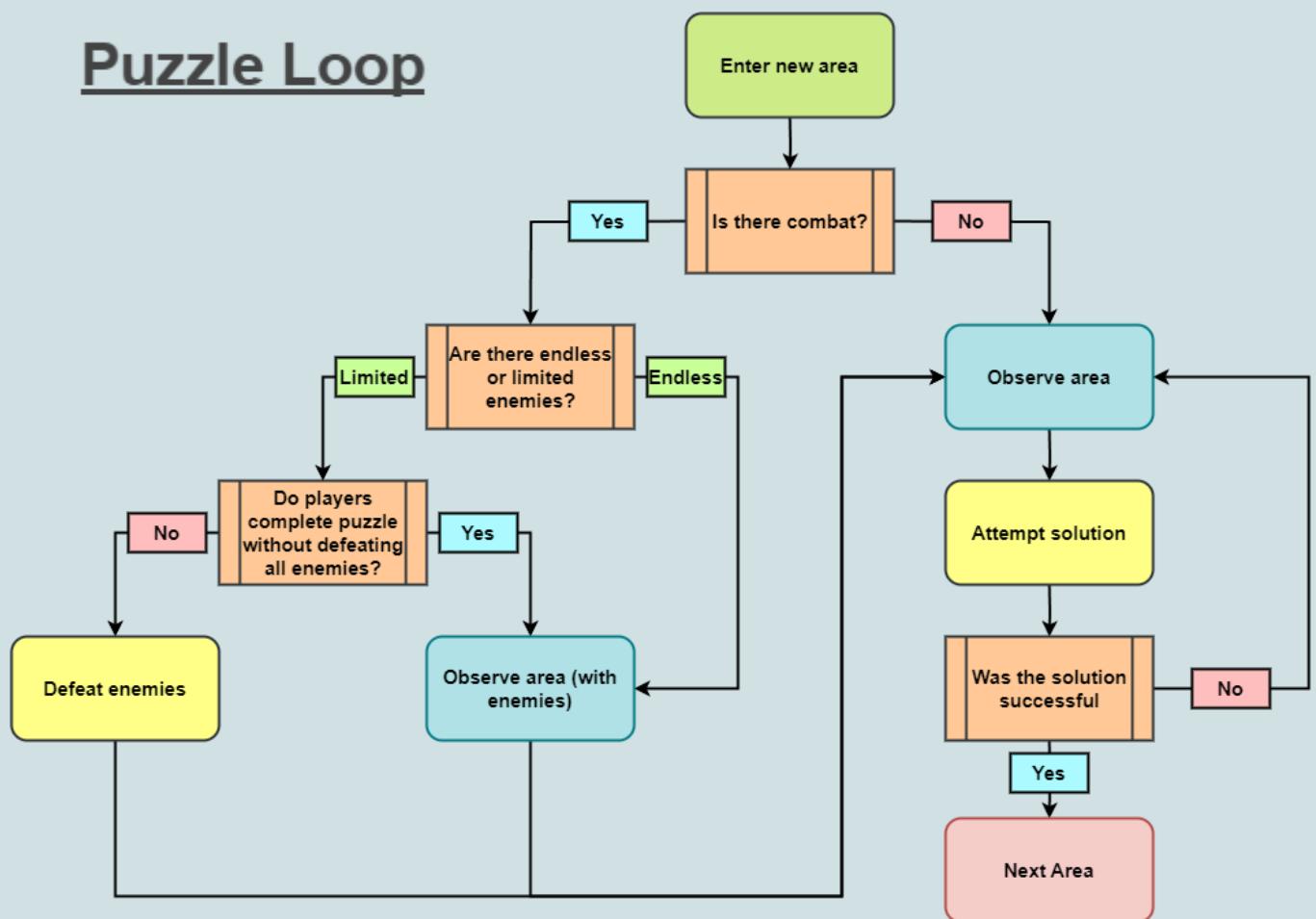
Legend



Level Loop



Puzzle Loop





Level Objective

The goal of each level will ultimately be to reach the end of the level *where the players must enter an elevator to progress to the next level*. Levels will start from the bottom left and progress usually to the top right, however, this may not always be the case.

Each level will follow a linear progression style where the players will only have 1 path forward through a level and will aim to have a playtime of ~2-2:30 minutes. This does not mean there won't be multiple explorable areas at once, just that in this case, those extra rooms would both help progress the main path.

Within the game, each level will represent a new floor of the building the players are moving up in to reach closer to the AI hivemind.

This progression will be achieved by defeating the enemies, avoiding hazards, completing puzzles, and reaching the elevator in each level.

There will be an interactable environmental feature that will help the player progress by changing an element of the environment called pressure plates. This interactable will do things like open locked doors or remove a hazard.

Every level will have the same overall goal (*get to the end*) however different levels may have different lower-level objectives (*this will be shown in UI*), such as:

1. Survive for X amount of time
2. Simply manoeuvre the end of the level
3. Kill all enemies
4. Solve a minor puzzle to proceed.

Each level will feature “arena” type rooms (1-2). This will force the player into a situation where they must complete one of the above objectives to progress. Once an arena is entered, all doors around the room will become sealed off until said objective is complete.

Level Design

Within the game, each level will represent a new floor of the building the players are moving up in. Each floor will be a mixture of corridors and rooms with the rooms being major combat areas. Enemies will spawn in corridors too, however very little.

Once all rooms on a floor have been cleared ([or objectives mentioned here](#)), the door to the next floor will open.

Levels will be constructed from modular assets in a tile system. These tiles will include:

- Floor tiles
- Wall tiles
- Outer Corner
- Inner Corner
- Door Wall

Levels will have environmental hazards and props that are not built into the tile system and will have an impact on the gameplay. These hazards include:

Object	DESCRIPTION	STOPS	EXAMPLE TILE IMG
Bollard	An obstacle that Sync can freely move through but prevents Ecco from moving through. Some are linked to pressure plates to raise / lower.	Ecco's movement.	
Low Obstacles	Low stack of obstacles that block both players' movement but allow enemies to move and shoot through (Sync can also shoot through).	Both players' movement (allows Sync to shoot through and enemy movement and shooting).	
High Obstacles (Prop)	High stack of obstacles which blocks both player and enemy movement.	Both players' movement and the enemy's movement.	
Pressure Plate	Will temporarily disable/enable a hazard or other level	n/a	

	aspect while a character is standing on it. One plate will be smaller, activating when either character is standing on it and permanently activating when Ecco stands on it. The other will be larger, only activating when Ecco is standing on it.		
Sliding Doors	Can open and close due to certain criteria (usually objective-based).	Both players and enemy movement while close. Allows everything while open.	
Spikes (CUT)	Will shoot out spikes after a short delay when a player moves over them. Will continually damage any characters while they are on top of the spikes. The spikes will retract after a short period.	Movement is dependent on spike type.	
Elevator	Acts as the ending of the level. The elevator doors will open depending on the conditions within the level. Once both players enter the elevator, the level is completed.		

Checkpoints

After an “arena” room is passed, a **checkpoint** will be set. Upon either player dying or meeting the respawn condition, both players will **restart** from this point.

Tutorialisation

Level 1

Players will be introduced to character controls and introduced to mechanics in the first level of the game.

- The players will be able to pause the game to see the character controls at any point in the game.



UI

Main Menu

The main menu will include:

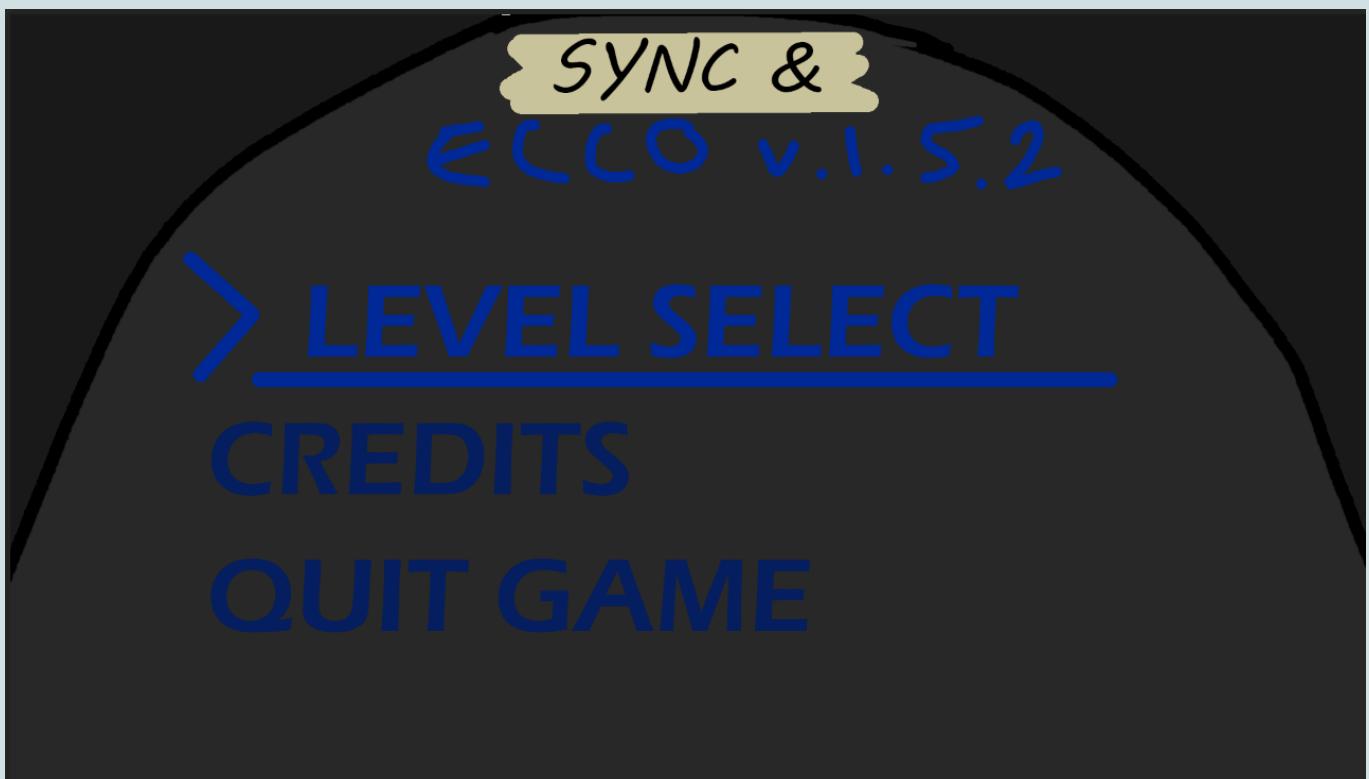
- Play > Level select (only allowed to select levels unlocked)
- Settings
- Credits
- Exit Game

Pause Menu

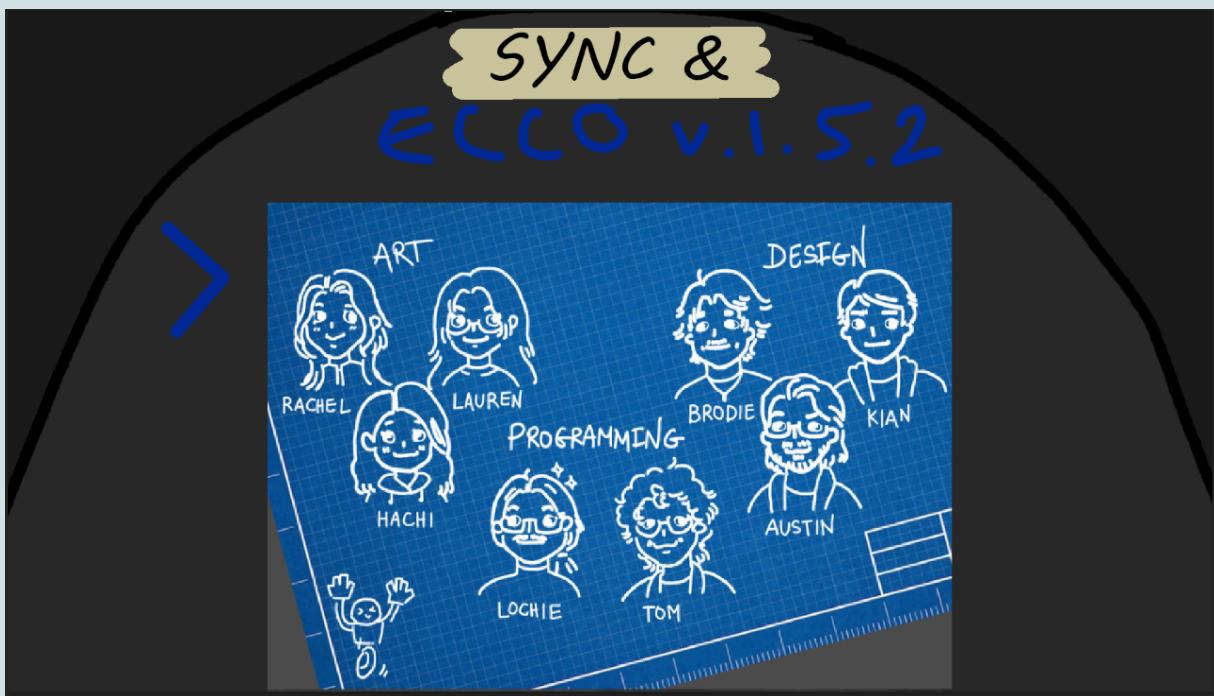
- The pause menu will show off the controls for both character
- Give the players the ability to quit the level. (return to menu)



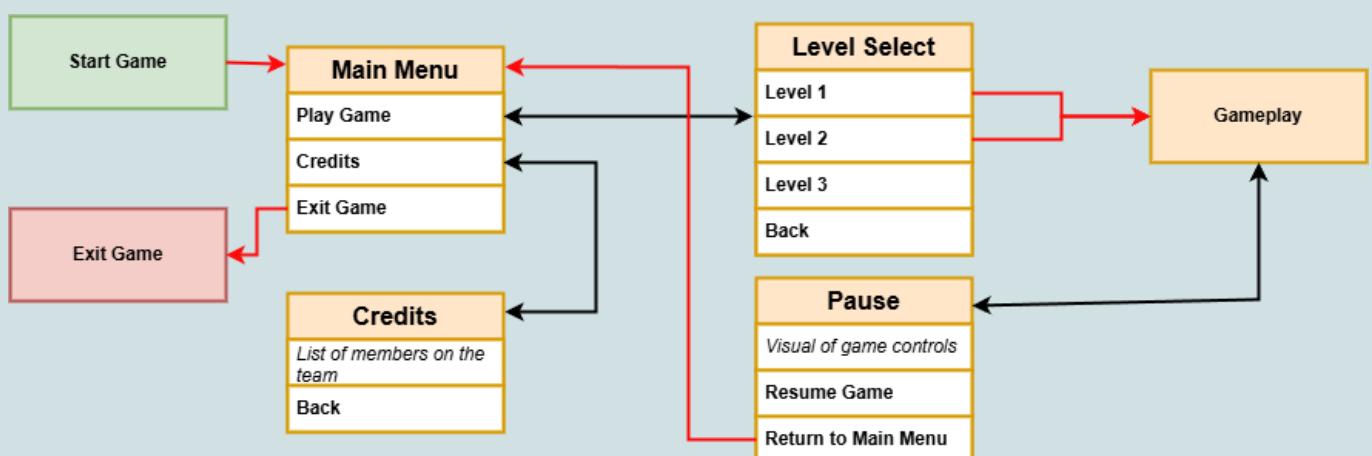
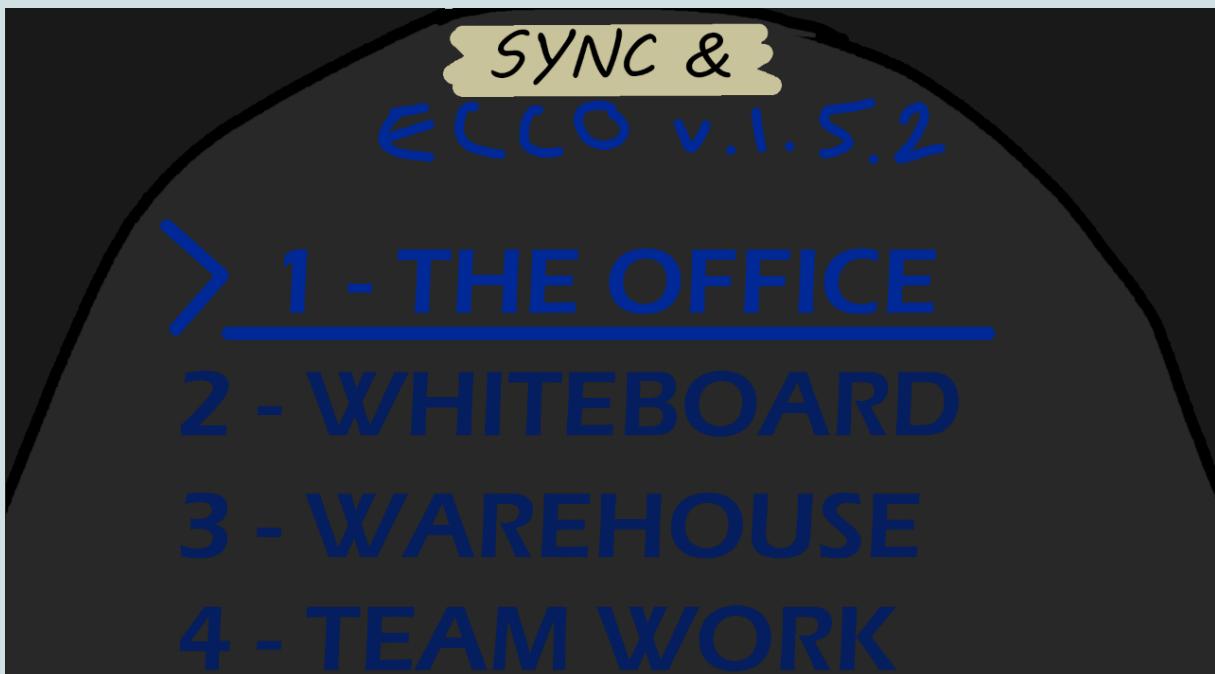
Main menu screen



Credits screen



Level Select Screen



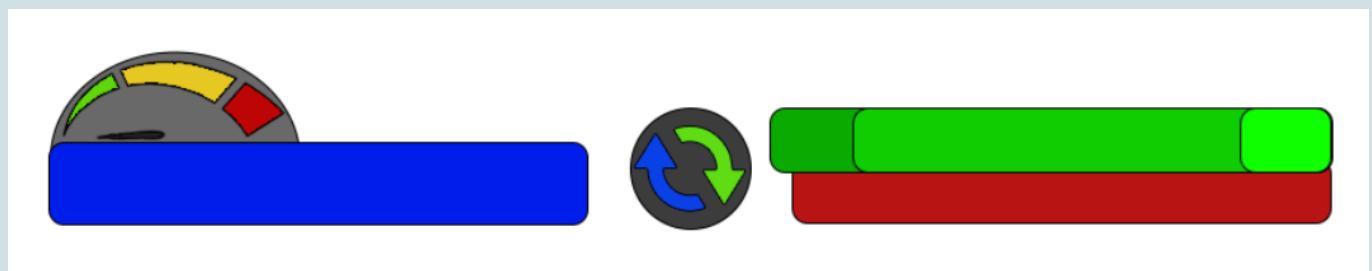
HUD

The in-game HUD will include:

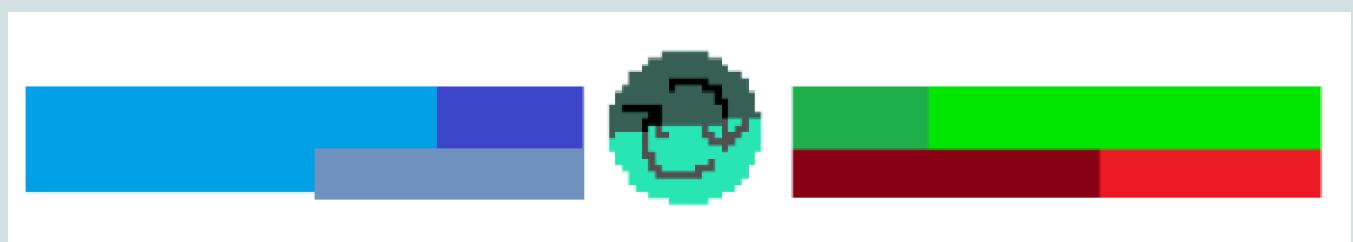
- Health bar (*both characters*)
- Character portrait (*both characters next to abilities to represent which abilities are for which character*)
- Resources
- Button to perform action
- When the healing ability is on cooldown, the ability is greyed out and a number is shown on top.
- When the ability is off cooldown, but players are out of range to use, the ability is greyed out.
- When the ability is off cooldown and players are in range, the ability will be highlighted (possibly have effects coming off of it)



Concept #1



Concept #1.1



Concept #2 (I do not have photoshop anymore)



Particles

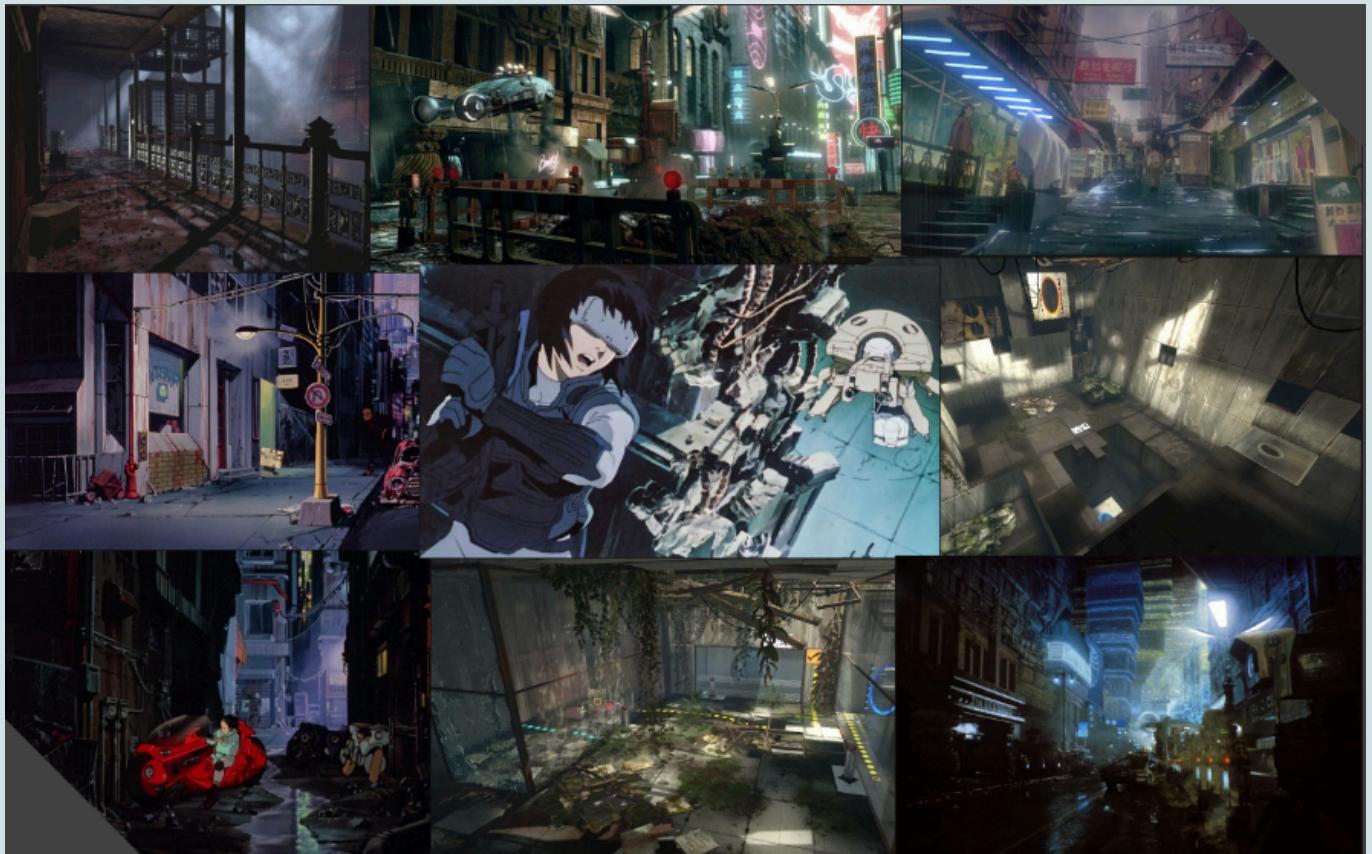
- Weapon attacks
- Abilities
- Movement
- Enemy attacks
- Enemy hit
- Railgun obstacle hit
- Enemy death
- Player hit
- Ecco wall hit
- Tire smoke from ecco moving fast
- Electric spark when Ecco collides with water
- Dust from when you step on a pressure plate

Player Feedback

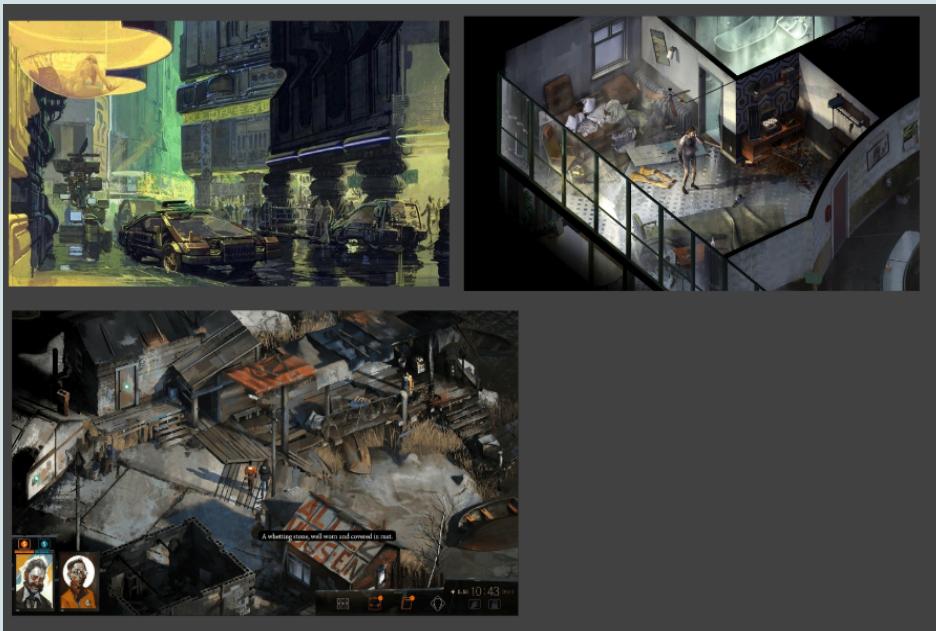
- Hit sounds
- Animations
- Particles on connection
- Extra stuff when abilities are used
- Attack indication? (like an indicator of direction/area an attack covers, either for basic attacks, or abilities).
- Outer circle + (to better show where characters are if needed)
- direction indication (to show the direction the character would attack in)
- Objective indicator/descriptor?
- Enemy health?
- Damage numbers?

Look & Feel

Mood Board - Art Bible



Artstyle



- Aiming for a semi-painted look using procedural brushstrokes
- Evoking oil paintings and classic sci-fi illustrations from artists such as Syd Mead, Vincent Di Fate and John Berkey
- Lifted blacks, desaturated tones and strong, simple palettes
- Graininess/grunginess



Sound

Combat

Rewarding feedback for players defeating enemies.

Sound Effects

Our sounds will be mostly realistic, with a lower bitrate to give it an almost retro sci fi feel. Lots of lasers and space-inspired sounds.

Music

Tracks depend on the setting of the level

Ambience

UI

Mimic cyberpunk-ish sounds.

Technical

Prototyping

Characters

Sync

Movement	
Notes	Variables
Circle hitbox Instantly moves in the direction of input	Movement speed
Weapon	
Only damages the first enemy hit	Damage (for each charge) Time between shots (different values depending on the charge of the shot) Time of attack (locks into animation after a shot is fired) Range of attack (for first charge attack) Width of attack (for each charge)

Ecco

Movement	
Notes	Variables
(TBD) (Is forward relative to world or character)	Max speed Acceleration Stop speed Reverse speed Turning angle
Weapon	
Damages all enemies in range	Damage Time between shots Attack delay time Attack duration (how long the attack will damage new enemies that enter) Time of attack (locks into animation) Range of attack

	Width of attack
--	-----------------

Controls

Supported Controllers

- Xbox One
- Xbox Elite Series 2
- Playstation DualSense
- Playstation 4 DualShock
- Drawing Tablet

Left Joystick	Sync: Movement Ecco: Turn direction (Global) Menu navigation
Right Joystick	Sync: Aim direction
D-Pad	Menu navigation
Right Trigger	Sync: Charge/Fire Ecco: Accelerate
Left Trigger	Ecco: Reverse
Left Bumper	Ecco: Healing ability/Revive ability
Right Bumper	Sync: Healing ability/Revive ability
Start/Menu	Pause
West Button	
North Button	Show controls (in options)
East button	Back (in menus)
South Button	Ecco: Boost Select (in menus)

Appendix

Looming questions

- What will the collision look like?
 -
- What will happen when the car drives into a wall?
 -
- What happens when players collide?
 - Ecco can push Sync, but not vice versa
- What happens when the player collides with the enemy?
 - Ecco will knock back enemies based on the speed they are moving. Sync will be able to nudge enemies out of the way when moving into them but the enemies will provide some push back.
- What happens when the enemy collides with the enemy?
 -

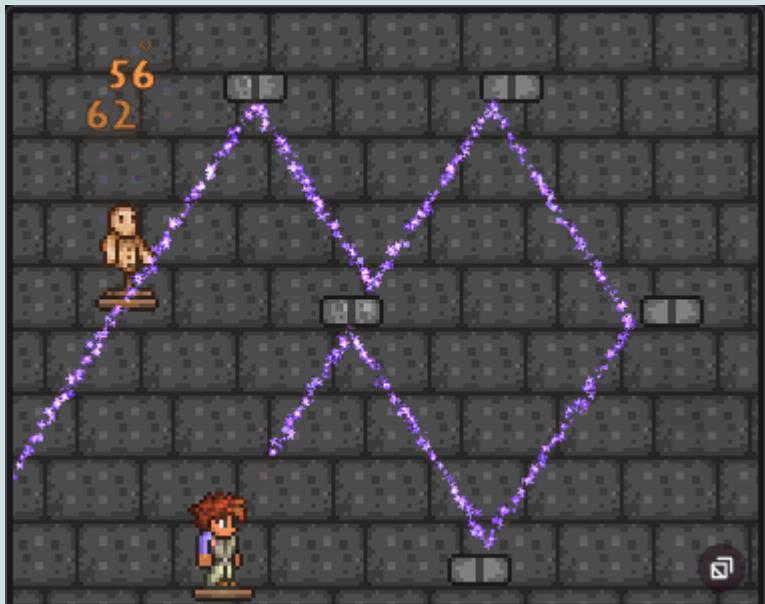
Brodie

-

Stretch goals

- Photo mode
-

References



- Helldivers 1
- Synthetik
- God's Trigger
- From space
- killing floor calamity
- project zomboid
- dark wood
- Teleglitch
- It takes two
- Hades
- Disco Elysium
- Gauntlet: Slayer Edition

Images used in GDD

- <https://www.dimensions.com/collection/vehicle-turning-path-layouts>

Market Research

- <https://www.gamesindustry.biz/arrowhead-games-we-want-to-be-the-next-from-software-or-blizzard> - Kian 14/08/2024
- <https://vginsights.com/game/394510> - Kian 14/08/2024
- <https://www.installbaseforum.com/threads/sales-numbers-for-every-ps4-and-ps5-era-playstation-first-party-games-have-been-leaked.2215/> - Kian 14/08/2024
- <https://store.steampowered.com/app/2282790/RIFTSTORM/> - Kian 14/08/2024
- <https://store.steampowered.com/agecheck/app/394510/> Brodie 14/08/2024
- <https://housemarque.com/games/alienation> - Kian 14/08/2024