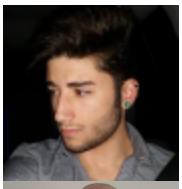
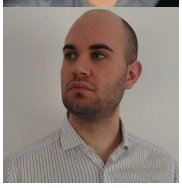

US ONE,
AS TWO
POM9
Playlab fOr inNovation in Games
UNIVERSITÀ
DEGLI STUDI
DI MILANO

Million Dollar Ice Cream Members

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Design History

When	What	Who
28/03/19	Document Format, Team Logo	Marco Faleri
01/04/19	Gameplay Synopsis, Story	Marco Faleri
02/04/19	Characters	Stefano Palma
03/04/19	Game World	Andrea Salamone
03/04/19	Target Audience, Platform,	Marco Faleri
04/04/19	Controls, Skills, Vision Statement	Marco Faleri
06/04/19	Gameplay Synopsis, Overview	Marco Faleri
07/04/19	Top Performers, competitors	Everyone
08/04/19	World Scale, Camera, Backstory	Everyone
15/04/19	Matchmaking, rules, media list	Marco Faleri
20/04/19	New Controls and Skills	Marco Faleri
26/04/19	Sors Behavior and Attacks	Everyone
03/05/19	Deceptio Behavior and attacks	Marco Faleri
09/05/19	Journey as top performer	Stefano Palma
10/05/19	Disconnections	Stefano Palma
15/05/19	Updated biomes	Marco Faleri
16/05/19	Skills and combos. Flowchart	Marco Faleri
19/05/19	Ref Images and Captions	Andrea Salamone
20/05/19	Demographic Target Audience	Everyone
01/06/19	Replay value, Achievements, basic Options	Marco Faleri
03/06/19	UI Sketches and Informations	Andrea Salamone

03/06/19	Other bosses, World Map and Loot	Marco Faleri
05/06/19	New Skill System, Modules, started in-game descriptions	Marco Faleri
05/06/19	Skill captions and descriptions, Player Characters Update	Andrea Salamone
07/06/19	Music and Sound Effects	Andrea Salamone, Marco Faleri
08/06/19	Other Bosses Biomes	Andrea Salamone
09/06/19	Boss barriers, in-game descriptions, media list update	Marco Faleri
25/06/19	Post playtest changes	Everyone

Vision Statement

Us One, As Two is a **2.5D Action Fluid-Roles Playing Game** for 2 Players, set in an open world.

It's a game about exploring a world previously inhabited by a now disappeared Humankind, and fighting the embodiments of every human aspect which has been forsaken in order to ascend into a superior state.

The players will face the world through two little robots representing the two opposite energies that compose everything, Entropy and Order.

Since each of these little robots is immune to his own energy but is damaged by the opposite one, they can't survive alone. Boss Fights are based on this concept: **players will need to act as Tanks or as Damage dealers depending on the specific situation and the particular boss,** creating a Fluid-role playing game.

Game Logline

Protect each other, attack as one. You are alone. Together.

Gameplay Synopsis

The game can be imagined as split into two counterposed experiences: exploration roaming in the open world, and fights against eminent creatures (see Titan Souls or Shadow of the Colossus). The key concept of the game is that everything can be imagined as powered by two opposing energies: Entropy and Order. The unique exception to this rule are the two main Characters, each of which is powered only by one of these two energies: it is immune to his own energy but is damaged by the opposite one.

The challenge of the game is strongly based on this concept: **players will need to protect each other and to attack the enemies adapting** to the peculiar situation and boss they are fighting.
We aim at pushing the hardcore coordination part of the game even further; there will be **abilities that can be triggered only by cooperating** (e.g. one player launches a bomb that only the other can trigger).
Through the game, players will unlock several skills (by defeating bosses) and will be able to choose their own skills set, to adapt to the different fights.

Bosses, which represent several aspects of human nature and culture (like Chance, War, Mischiefs and so on), are scattered around the game world.

To each boss, we will associate a leaderboard showing who killed it in the least amount of time.

Players will unlock the view of the leaderboard (and the possibility to see how much time will it take for them to defeat each boss) only after completing the game for the first time.

Through the game, you will find several clues of the past world. All the skills obtained in the game will have a description, used to tell the lore of the game. **The description the players will read will vary depending on their character: one will read the "Entropy" version, the other will read the "Order" version.**

The game is set in a distant future, after the peaceful disappearing (SPOILER: the ascension) of the humankind, in an island now inhabited by few eminent and strange creatures, the bosses, which alter the whole landscape around them, creating several different biomes in the map. We aim to create a very unique visual experience for the players, who will travel across very strange and unlikely areas.

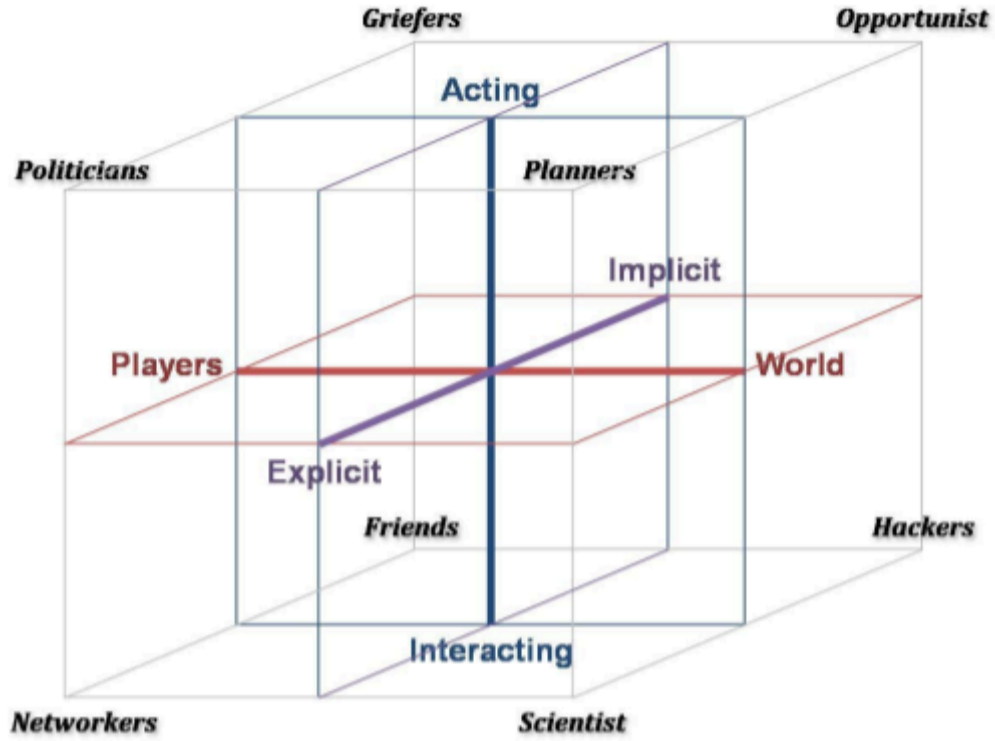
The Graphics will be simple **middle-low poly**, in order to have a characteristic (but most importantly, affordable) aesthetic.

Audience, Platform, and Marketing

Target Audience

The game has been designed around Hardcore gamers capabilities. We actually target the player who has played a lot of games and is actually looking for some new mechanics to challenge her.

Even if we are not building an MMO, we choose to work with Bartle's Player Types theory, in order to have a commonly acknowledged tool.



Bartle's 3D graph

The Game concept was built around Achievers: Planners and Opportunists. In particular, **we find the game to be exceptionally suited for Planners**: our hardcore fights against bosses will dictate a hard challenge that needs to be carefully planned to be overcome.
We find the game suitable also for both the types of Explorers: what does it matter is that there are some skills to be discovered, areas, bosses, and that everything has a strong meaning. The whole lore of the game has been constructed keeping in mind Explorers needs and desires.

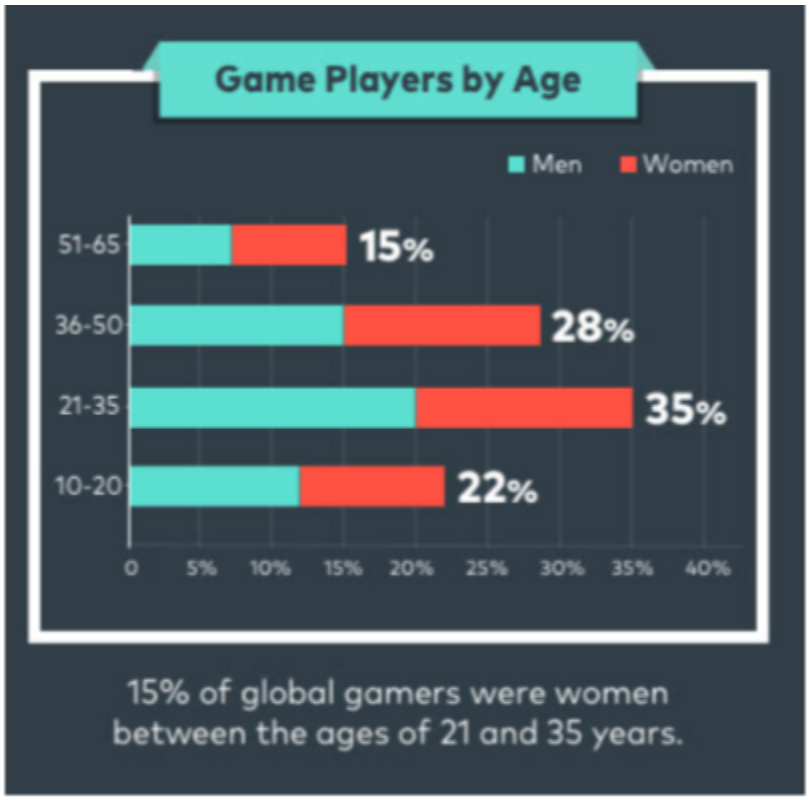
Talking about Socializers, **the game is strongly suitable for Friends** since the game aims at creating a strong bond between players, people will find very compelling to complete the whole game with their closest friends. On the contrary, we think the game will be less appealing to Networkers since we won't

provide guilds or something to network with, but we think there is some potential in the leaderboards: experienced players will look for each other, in order to try to set new records.

Since the game, for its current structure, does not support any kind of player versus player content, we think both Politicians and Griefers (Killers) won't find much content suited around them, apart from the leaderboards.

Demographic Taxonomy

The core audience intended for the development is the range from 16 to 29 years, people mature enough to appreciate the ambient and the challenge of the game world, but with still a reasonable amount of spare time to enjoy more than one boss per gaming session.



Filmora's chart for game players distribution by age for 2019. [1]

The game is mainly targeted to hardcore players willing to spend a large amount of time playing, however, we plan to make even the single boss experience enjoyable in order to make the game appealing to a larger part of the audience.

For this reason, we consider the game to be also appealing to 30+ Years old, even if their little amount of free time will give them some trouble in completing the hardest boss fights in just one session.

[1] https://filmora.wondershare.com/infographic/video-game-trends-and-stats.html

We acknowledge the game to be not particularly suitable for people younger than 12.

Nonetheless, our game genre (Action/Adventure with RPG elements) is one of the most popular in our platform: being the first favourite of women players and the third favourite among men.

FAVORITE GENRES PER PLATFORM					
		♂ Men		♀ Women	
Console	1	SHOOTER	38%	ACTION/ADVRNTURE	35%
	2	SPORTS	37%	STRATEGY	32%
	3	ACTION/ADVRNTURE	35%	ARCADE	26%
PC	1	SHOOTER	41%	ACTION/ADVRNTURE	36%
	2	STRATEGY	40%	STRATEGY	35%
	3	ACTION/ADVRNTURE1	35%	SIMULATION	31%
Moble	1	STRATEGY	35%	PUZZLE	48%
	2	SPORTS	24%	STRATEGY	32%
	3	SHOOTER	26%	ARCADE	25%

Favourite game genres chart according to Filmora's article for 2019.

Game's features and symbols are designed to work in the whole world, for further details, check the Localization chapter.
To deepen the knowledge about estimate sales, check the Technical Design Document.

Platform

Us One, As Two will be developed for PC since it's the main gaming platform of our target audience.
In particular, we choose to avoid Mobile deployment since the experience we offer requires strong concentration and precise controls, two features that can't be properly addressed in Mobile Contexts.

We may decide to port the game to PS4 or Switch in a second moment, depending on the availability of dev-kits, even if it will require several rethinking of the control system.

The game will be developed in Unity 2019.1, with **Lightweight rendering pipeline**.

System Requirements

System Requirements can be found in the technical design document. What we care to underline here is that the game will be playable with a controller as well as with mouse and keyboard.

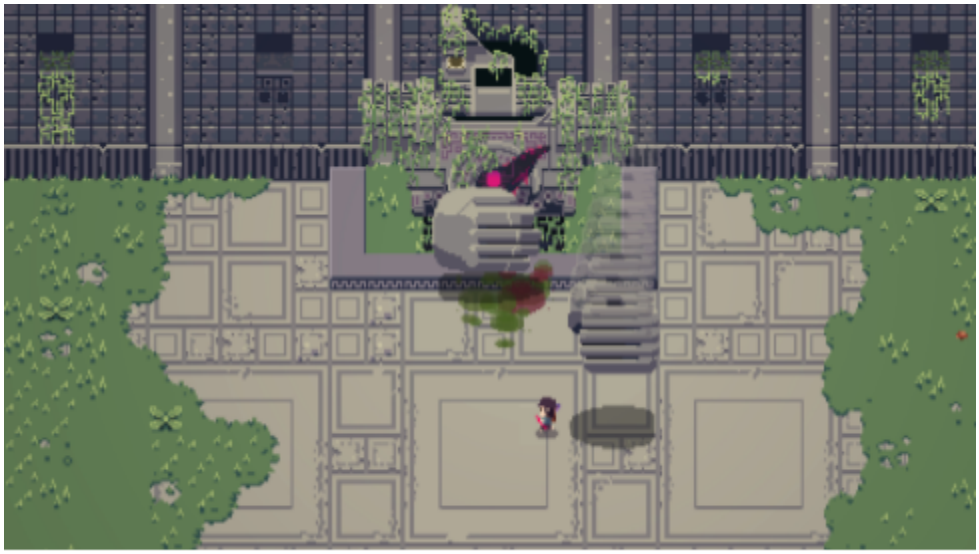
Top Performers

The main inspirations for the game are Diablo-like games and every MMO with challenging boss fights, or 2D Action-RPG games (Hyper Light Drifter, Hollow Knight, but also Enter the Gungeon).
In addition, this game is placed in a category of games that require two players with high coordination, for example, We Were here or Two Brothers.

The feeling of loneliness in a savage world inhabited by eminent entities is inspired by Shadow of the Colossus.

Let's now analyze in detail the games which we can identify as our own competitor or which are interestingly similar to our games for some reason.

Titan Souls[2] - For the uniqueness of boss fights



Titan Souls' boss fight.

Titan Souls is a top-down, open world, action-adventure featuring boss fights where both players and bosses are killed in one hit. **The fights are all different from each other and the player must strategically figure out how to kill their enemies avoiding their attack pattern**, the only weapon

[2] Developed by Acid Nerve, Published by Devolver Digital, for Windows, Mac, Android, PlayStation 4, PS Vita, 2015
https://store.steampowered.com/app/297130/Titan_Souls/

available is a bow, shooting an arrow that can come back at will, used to damage the bosses in a very precise weak point that is uncovered in peculiar moments.

Feature comparison

Us One, As Two shares a similar player base with Titan Souls, the feeling of being alone in an abandoned game world is always present, even though it is a bit relieved by constantly having another player as a companion. The same thing applies for boss fights where players, in both games, will experience overwhelming challenges that, with the right attitude and practice, can be extremely rewarding once overcome.

Wizard of Legend[3] - For the cooperative play and skills



Wizard of Legends, cooperative gameplay moment.

Wizard of Legend is a very fast-paced dungeon crawler/roguelike, playable both in single player or in coop mode. Each time the level is completely randomized, you need to face 6 rooms with 3 bosses randomized from a pool of 4, representing the elements in the game. **The player has to build its own arsenal of skills from a range of possibilities, fitting its own playstyle.** The game can be played single player, but it has a **coop mode where two players will have to face every enemy together.**

[3] Developed by Contingent99, Published by Humble Bundle, for Windows, Mac, Linux, Nintendo Switch, Xbox One, PlayStation4, 2018 https://store.steampowered.com/app/445980/Wizard_of_Legend/

Feature comparison

The coop experience of two players facing powerful enemies and the possibilities of combining different skills in a personal build are similar to the ones we intend to deliver. We, however, will focus more on coordination and communication rather than individual performance together, for this very reason, Us One, As Two is based on cooperative skills that reach their full potential when used in combination with other skills or attacks done by the other player.

Battlerite[4] - For the high paced action



Battlerite's gameplay moment.

Battlerite is an action-packed Team Arena Brawler focused on competitive PvP combat. Like MOBAs, you play with a team composed of unique champions against another team, in 2v2 or 3v3. What we care about Battlerite is its pacing: the arguably most important aspect of the whole game besides the control system. In a market overcrowded by MOBAs with point and click controls, Battlerite proposes very precise and compelling controls: **you move your Champion using WASD, and you target your abilities using the mouse.** For this reason, players' dexterity is the most important skill required, creating a very challenging and funny experience, in such a way that the game becomes particularly loved by ultra-hardcore gamers.

[4] Developed and Published by Stunlock Studios, for Windows, 2017
https://store.steampowered.com/app/504370/Battlerite/

Feature comparison

While designing completely different challenges (PvE instead of PvP), we think it is very important to address Battlerite for the ultra-hardcore player base it obtained thanks to its pacing, the same pacing we would like to realize in our battles. Furthermore, we add a new level of depth: the whole fluid-roles playing experience, where you have to dynamically shift from attacking to protecting, as well as coop-based skills, that can be triggered only cooperating.

Journey[5] - For the game world and the cooperation



Journey's exploration gameplay moment.

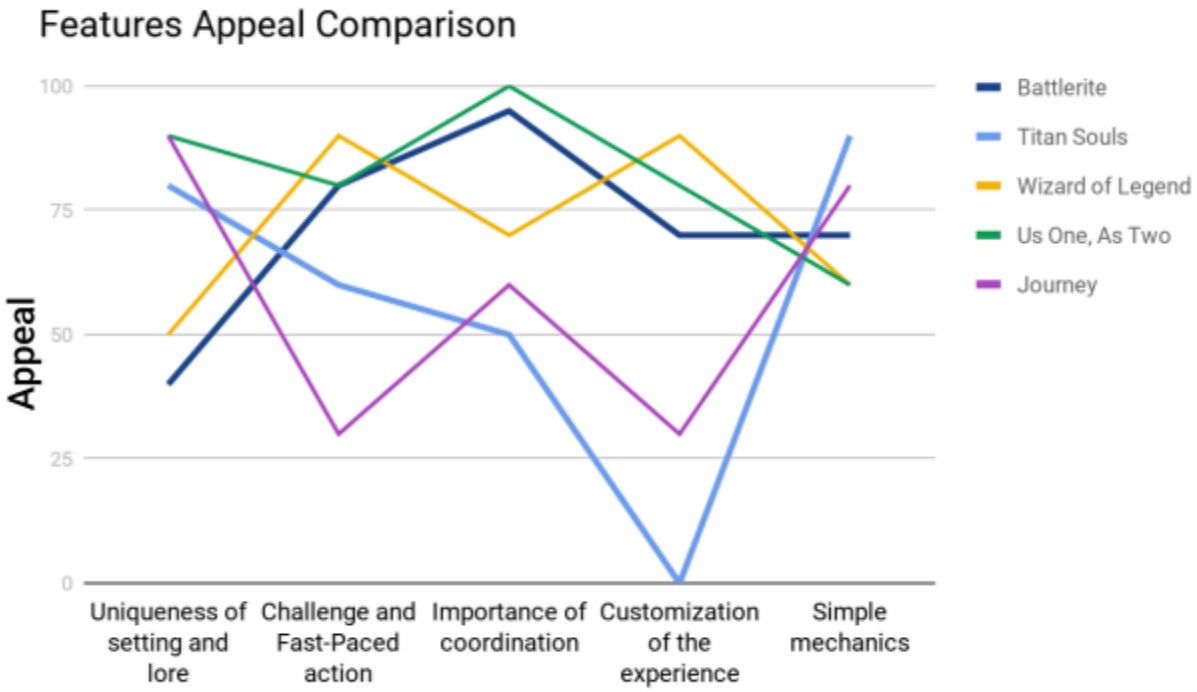
Journey is a cooperative, artistic adventure game. The player plays as a mysterious robed figure in a vast desert, with the objective of reaching a mountain set far away. Using your ability to fly you need to solve puzzles in order to progress and open new areas. Occasionally **another player will join your adventure helping you progress**. The only way to communicate is by using a peculiar sound unique to each player. During the adventure, the player will meet other helpful NPCs and occasionally some hostile creatures that he will need to avoid.

[5] Developed and Published by Thatgamecompany, for Sony PlayStation 3, 2012
http://thatgamecompany.com/journey/

Feature Comparison

Journey and our game have a somehow similar mood. In both games the player will find himself in an abandoned world, one of the last survivors and will need to figure out what happened while progressing. The other similarity is the possibility of another player to join in order to cooperate. The main difference is the gameplay, our game is combat oriented focusing on fighting cooperation more than puzzle ones. Another difference is that, even if essential to the experience of Journey, you only have minor advantages for being with another player, our game absolutely requires the presence of another character in order to progress. Another notable difference is that while in Journey you can encounter useful NPCs our world is inhabited exclusively by hostile creatures.

Feature Comparison Overview



Features Appeal values based on Tynan Sylvester's market value curves[6].

The uniqueness of Us One, As Two

Us One, As Two is a transcending synthesis of its main competitors: it takes the uniqueness of bosses from Titan Souls, deepening it and creating **hard challenging boss fights** instead of puzzle-like ones; it

[6] **Designing Games: A Guide to Engineering Experiences, Tynan Sylvester.** Value Curves, page 255. https://books.google.it/books?id=4Fcr1T2qP6QC&pg=PA255&dq=The+market+value+curves+games&hl=it&sa=X&ved=0ahUKEwjArrS9sNLhAhUJCewKHSSOAnUQ6AEIKTAA#v=onepage&q=The%20market%20value%20curves%20games&f=false

takes the fun of playing together in Wizard of Legends, increasing it by introducing **new unique ways of cooperating**; it takes the deep control system from Battlerite, reinventing it for challenging cooperative PvE. All of this in a unique and strongly **symbolic and artistic setting.**

Legal Analysis and Localization

Legal Analysis

We currently plan to create all our Assets or to buy them from the Unity Asset store, to avoid copyright issues.

Localization

Besides the colors of the two dominant energies of the game, no other relevant localization issues are present.

The game will be entirely in English. We are considering to localize the game in Chinese (Mandarin), Spanish, Italian, and French. To cover the most diffused language in the world. Check the Technical Design Document to know more about servers distribution around the globe.

Asian Localization

We plan to swap the main colours of our two main characters and all the relative energies, to match the Asian concepts of Entropy and Order.

Gameplay

Overview

The two players have to explore the world, to find and defeat all the bosses of the map.
To achieve this, they must be able to adapt and to plan the fights, since all the bosses will be quite hard to defeat, and will have a very characteristic behaviour. Players can customize their character, using **modules**, which are dropped by defeated bosses. The fact that the players need to protect each other from time to time, and that the strongest skills are designed around players cooperation, **make the teamwork the pulsating core of the gameplay**.

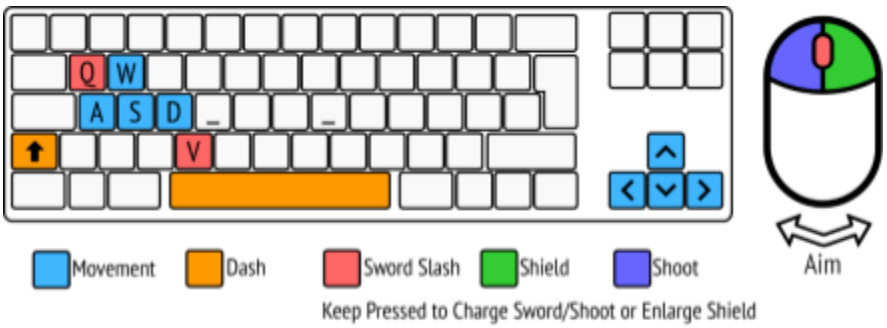
There will be two game modes: Us One, and As Two. The latter functions as we described: two players, together, roam around the world to find and defeat all the bosses.
Us One is slightly different since it has been designed to play with strangers: the player roams alone in the world but is paired with another player dynamically when they are close to a Boss and are about to fight.

Controls

The control system is intended to give a fast and responsive gameplay experience. The characters will be controllable both with mouse and keyboard and with joypads.
The player will move her own character using WASD or the left analog stick, and will "rotate" its character using the mouse or the right analog stick.
The player will then use his skills by pushing LeftClick, RightClick, Shift, Q, E; for the joypad it will use Left Trigger, Right Trigger, Left Bumper and Right Bumper, Right Stick Click and Left Stick Click.
The key bindings will be fully customizable.



Joypad Controls.



Mouse and Keyboard Controls

Skill System

In the game there are 3 types of skills: Basic skills, Charged skills and Combined skills.

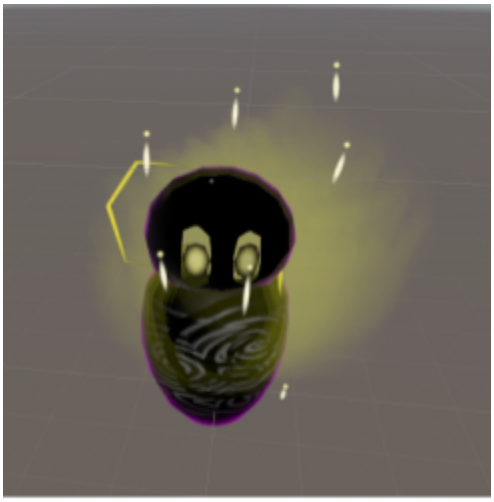
Each player has **4 basic skills: shield, sword, shoot, dash**. Order and Entropy have different graphical versions of each skill, but their effects and behaviours are the same.

Every skill but the dash can be charged, to produce a **Charged Skill**. Charged skills have a complete new aesthetic, and must have yellow details (we want to give the player some hint that she can interact with projectiles or attacks of the other: we will use yellow only in this game entities, to create a color code for "interactable attacks"). Each basic skill has many versions of charged skills, which can be chosen by **equipping Modules. Modules** are our customization system.

Furthermore, Charged skills can trigger **Combined skills**: if the other player interacts with them (e.g. one charged skill is a slow and big projectile, which can be shot by the other player, in that case, it explodes, dealing damage of both the elements).

There is another power, called "**Resonance Speed**", which is available only during the exploration: while players are close, they gain a speed boost. This is used to give players some little toyful mechanic even in the low pacing of the exploration, to entertain them.

The Resonance speed is shown with a yellow aura emitted by the characters.



Aura effect in game

Another "Skill" is the **teleport**: in the in-game menu, in the map section, the player can choose to transmigrate to one of the visited/activated checkpoints.

For the moment, Order and Entropy have the same skills, but we do not exclude them to have "Signature moves" or skills that are exclusive to one of them.

Modules.

Modules can be divided into 3 types:

1. Melee modules: these modules affect the melee attack.
2. Ranged modules: these modules affect the ranged attack.
3. Extra modules: these modules have special effects.

Each player has 3 Slots, one per type, and can choose which module to install in the in-game menu.

Each module will have a short description, which is very important for us, since it will be one of the main methods to tell our story. **This description will be different if the player's avatar is Order or Entropy.**

Here follows the table containing all the modules actually designed.

Module	Type	Effect
Energy Ball (Pre-installed)	Ranged	A slow and charged projectile
Laser Beam	Ranged	A fast and narrow light beam
Trigger	Ranged	Applies a trigger on the target hit
Wide Slash (Pre-installed)	Melee	Medium range slash
Spear	Melee	Long range, narrow attack
Hammer Blow	Melee	A short range attack exploding upon impact.
Charge	Extra	Player deals damage at the end of the dash.

Mirror Shield	Extra	Shield reflects and double the friendly attacks
Hook Shield	Extra	Keeping the shield attracts the other player.
Balance	Extra	Coop parry. If players activate shield in the same instant, they reflect attacks for a certain amount of time.

The modules available from the beginning will be implemented in the prototype.

Descriptions

Apart from starting modules, which will have simple descriptions, the other modules will have more complex descriptions. These complex descriptions will tell the lore of the game.

Module	**Order Description**	**Entropy description**
Energy Ball	Your strongest power is stronger when shared.	Your strongest power is stronger when shared.
Wide Slash	Weaker alone. Stronger together.	Attack as one. Protect each other.
Energy wall	White is power. Black is danger.	Black is power. White is danger.
Mirror Shield (Dropped By Deceptio)	Once forward a time, Deceit will be clear: the same with mankind, to hold'em all rear. That, Machine will find: Fraud will disappear. People no longer blind, the Liar will arrear.	Once Forward a time, for Deceit the turn will come. the father of all crimes Will now be forever gone. With no more lies or deceits, every Nation will fall apart. Both the wealth and the needy will love Truth as real Art.
Laser (Dropped by Sors)	Once forward a time, the Chance to be harmful, the Committee will find. And the machine, blissful, to be finally unbind: "now the Chance will be NULL".	Once Forward a time, The chance will be no more. To the people the certainty, A gift never seen before No fake believes, Responsibility, unforeseen.

	Certainty as gift, kind: People will start to mull.	Certainty as first gift, From the just built Machine.

Basic Skills

Dash

Medium-range dash, **no immunity to hostile attacks in between**.

Shot



Order basic Shot.



Entropy basic Shot.

Long-range attack, projectiles are small.

Shield



Entropy (on the left) and Order (on the right) Shields.

Short-range shield covering an arc in front of the player, it **absorbs** incoming attacks of the **same element of the character** using it.

While the shield is being held, it increases in size over time, up to a maximum size: the player's speed is reduced when the shield is at maximum size.

The shield is intended to protect the other character, since enemy projectiles with the same element of the shield user will just pass through his body if not shielded, hitting the ally if in the same direction.

If an attack of the opposing element hits the active shield, it will be absorbed but the player will be **stunned**, cancelling and denying any movement and action for a short delay.

Sword



Entropy (on the left) and Order (on the right) basic Sword Slashes. [7]

Short-range attack covering an arc in front of the characters.

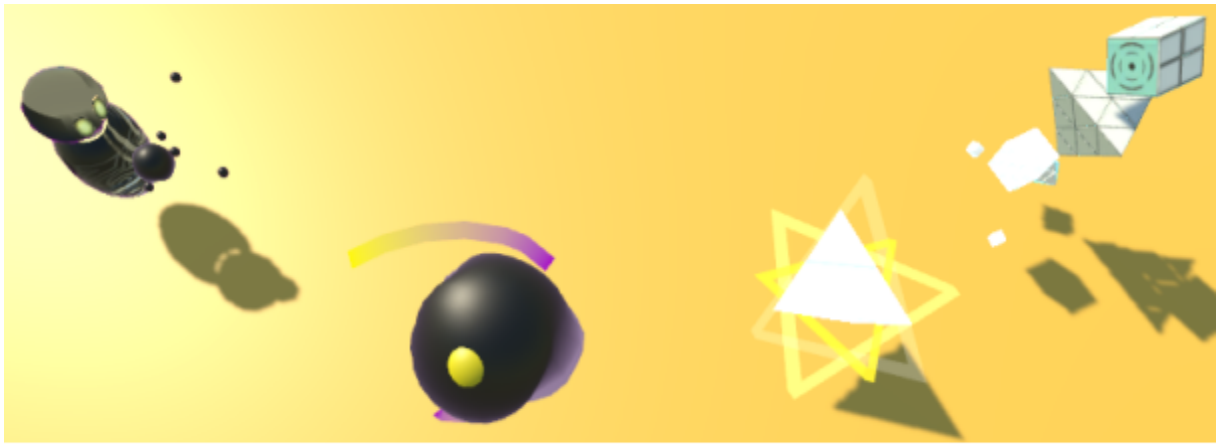
Charged Skills

Energy Ball



Entropy and Order charging the Energy Ball using their own energy type.

[7] We thank Mirco Lombardo and Simone Fedrigo for the swords.



Entropy (on the left) and Order (on the right) shooting their Energy Ball variants.

Long-range slow attack, the projectile shot is way bigger than a normal projectile.

Yellow details can be observed in both the two Energy Balls (small yellow spheres in the Entropy's attack and yellow triangles surrounding the Order's attack), showing the possibility to trigger a **Combined Skill**.

Wide Slash



Entropy and Order Wide Slashes.

Medium-range attack covering an arc in front of the characters.

During this attack, the swords will **glow in yellow**, showing the possibility to trigger a **Combined Skill**.

Combined Skills

As previously stated, if one players interact with a Charged Skill of the other player, a Combined Skill is created. In particular, we create different combined skills **depending on the particular combination** of Skills, as the following table suggests.

Type/Type	Melee	Ranged
Melee	Sparkles	Homerun
Ranged	Homerun	Explosion

We have considered other Combined Skills that could be interesting to augment this type of skills:

Melee vs Melee could have different effects: an Earthquake, Buff the players.
Melee vs Ranged could as well have different effects: place a mine, generate a hurricane.
Ranged vs Ranged: X-shaped explosion, bullets storm.

We think that these new effects should be determined by the Charged Skill in use: e.g. an Energy Ball hit by the hammer could become a mine.

Homerun



Order attacking Entropy's Energy Ball with Sword.

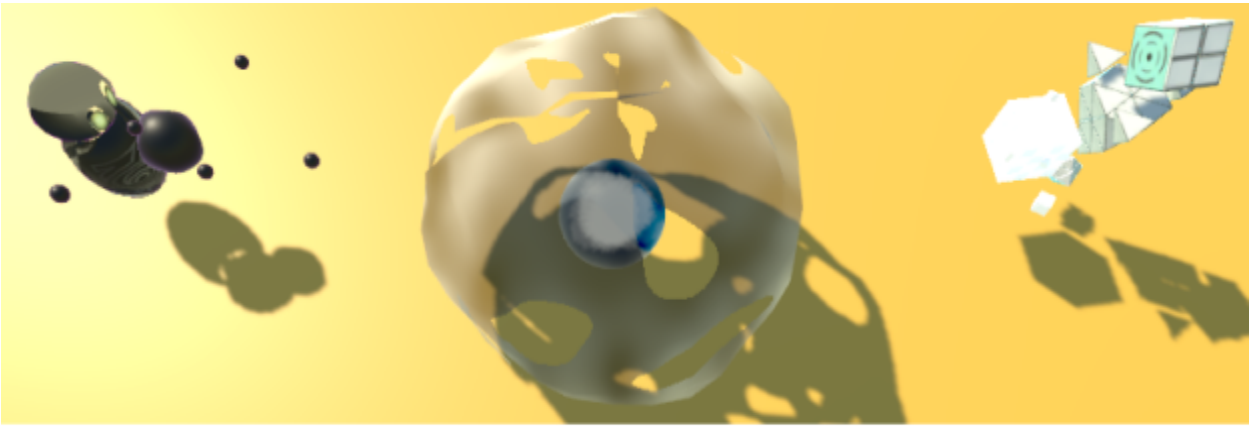


Order triggering the Homerun Skill.

A long-range, fast-moving projectile, dealing heavy damage upon hitting an enemy. This skill is triggered by hitting a **Charged Ranged Skill** with a **Charged Melee Skill**

The direction of the homerun is the direction the player using the sword is facing.

Explosion



Explosion Combined Skill, triggered by the clash of an Energy Ball and another allied projectile.

A medium-range explosion, dealing heavy damage to the enemy in its surroundings. This skill is triggered by the **collision** of a **Charged Ranged Skill** and an ally's Ranged Skill.

Sparkles

Little storm of entropy and order projectiles, like sparkles. Medium range, it is particularly strong if very close to the enemy. It is triggered when a Charged Melee skill collides with another Charged Melee skill

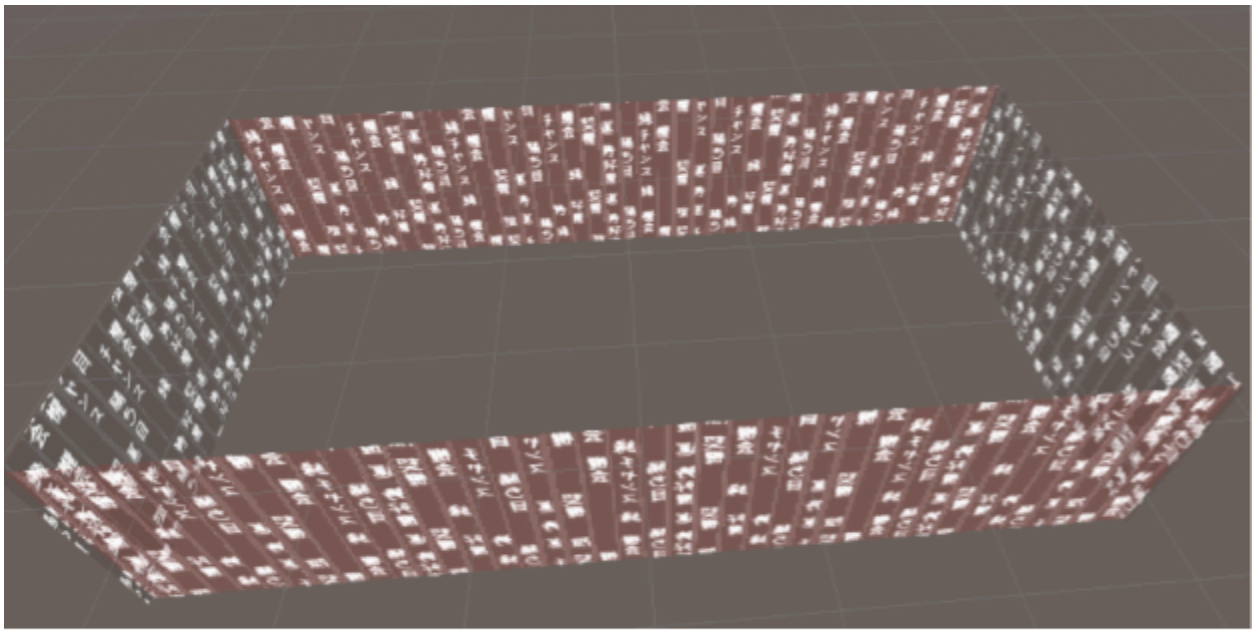
Bosses

The only enemies present in the world will be bosses. They will be found in their own biome, different from the rest of the world. Each boss will have a health bar of hundreds of health points. Once the bar reaches zero the boss will be defeated. Each boss will give to both the players its Module.

Apart from exceptions, every boss will have barriers around itself during the bossfight. These barriers are essentially extra Health Points. These barriers can be Black or White: the black barrier can't be damaged by entropy attacks, while the white one can't be damaged by order attacks.
Once a barrier will be emptied, it will take a few seconds before creating another one, to give players the chance to make some damage to the effective Boss' health.

These barriers represent the energy actually channeled by the boss: e.g. the boss will tend to make more Order attacks while protected by the White barrier.

Each encountered boss generates energy walls around the combat area, to prevent players from escaping.



Sors energy walls

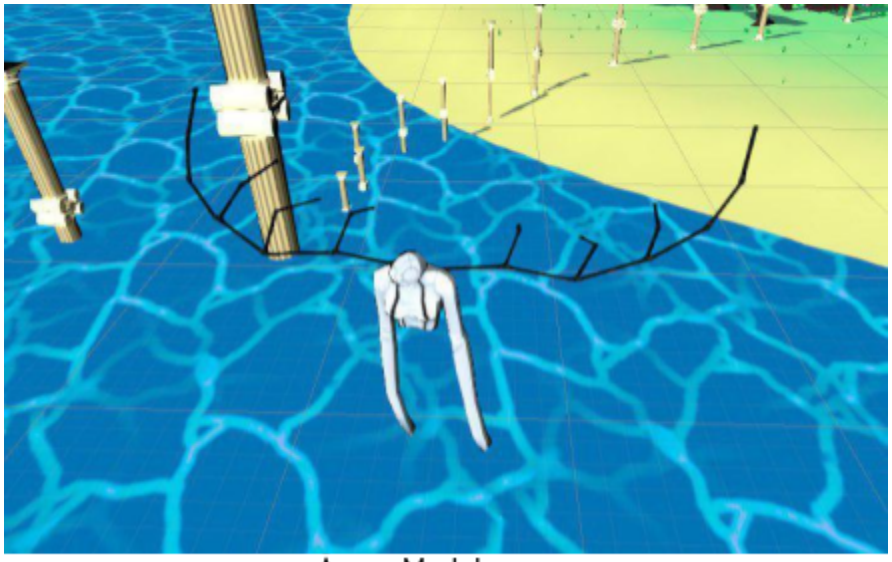
In the final game, after all the bosses will have been defeated, the final boss fight will be unlocked.

The Bosses in this version of the game are:

- Angor: the embodiment of anguish
- Sors: the embodiment of chance
- Deceptio: the embodiment of deception
- Bellum: the embodiment of war
- Solitudo: the embodiment of loneliness
- Marcor: the embodiment of pollution and disease
- Lex: the embodiment of Laws and rules
- Bestialitas: the embodiment of feral instincts.
- Life/Death: the final boss (bosses). In game it will be called "**Missing Data**".

Angor, Sors and Deceptio will be fully designed and developed for the prototype.

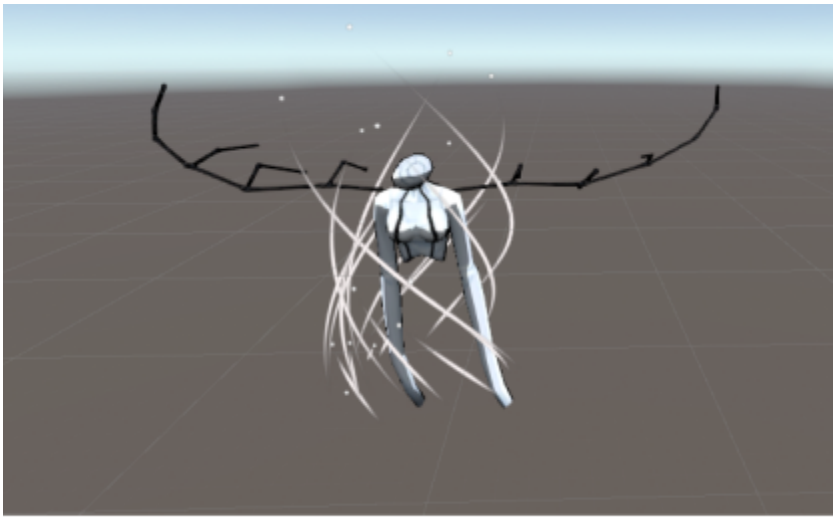
Angor



Angor Model

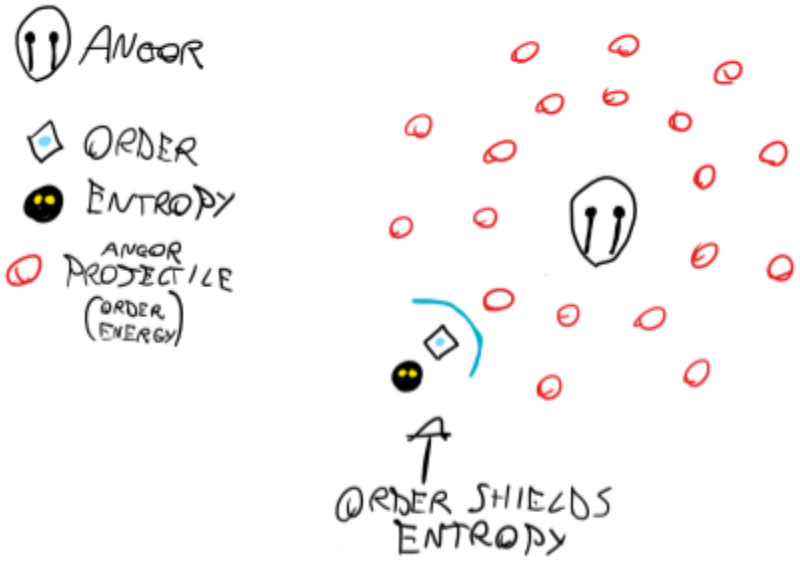
Angor is a very simple and readable boss. It has been designed as the first boss of the game.

It has only 2 attacks, whose energy depends on the aura surrounding the boss.



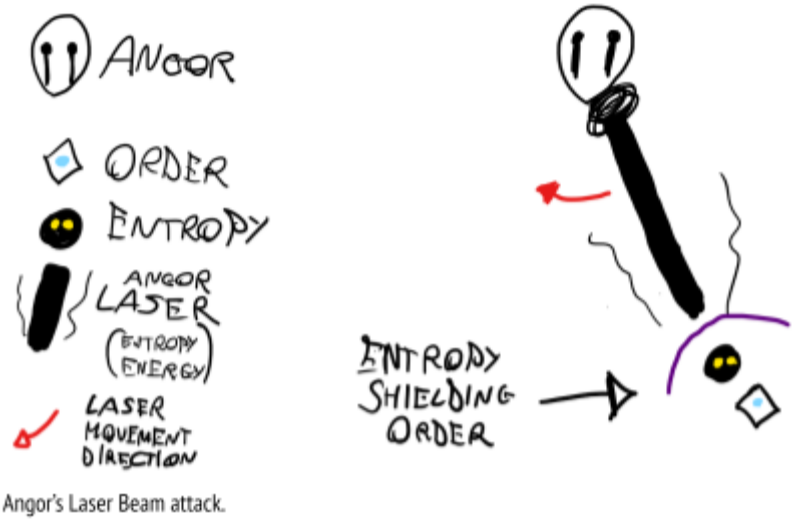
Angor White Aura.

1. Circular wave of projectiles.



Angor's circular wave of projectiles.

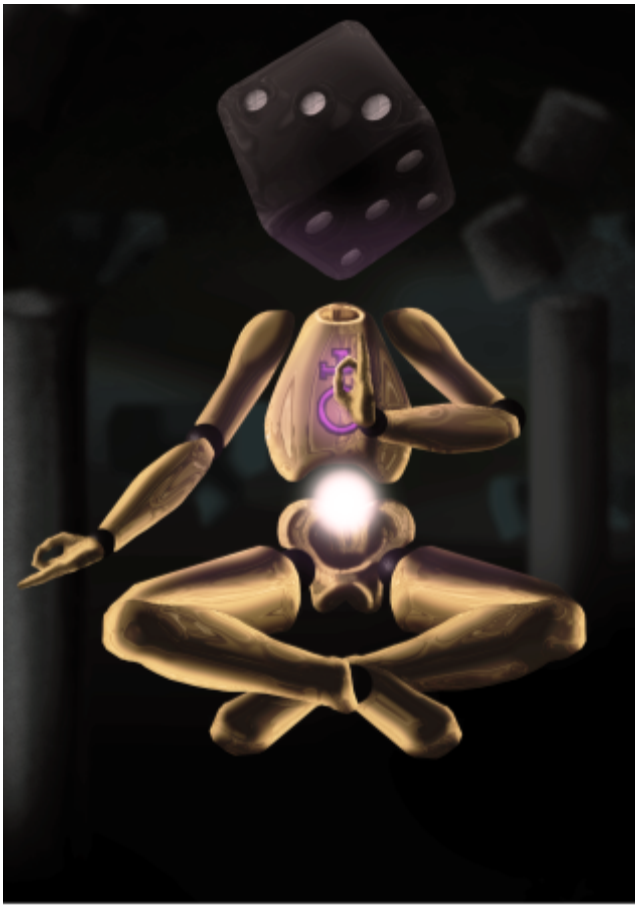
2. Single laser beam: the boss shots a continuous beam, whic 360 degrees.



Angor's Laser Beam attack.

At certain life values, it spawns a white or black shield, so that he can't be hit by order or entropy attacks respectively.

Sors, the Embodiment of Chance.



Sors concept, meditation pose.

Sors has 6 distinct attack patterns, related to the 6 faces of its die: indeed to attack, he will throw its die, the outcome of the throw will determine its attack.

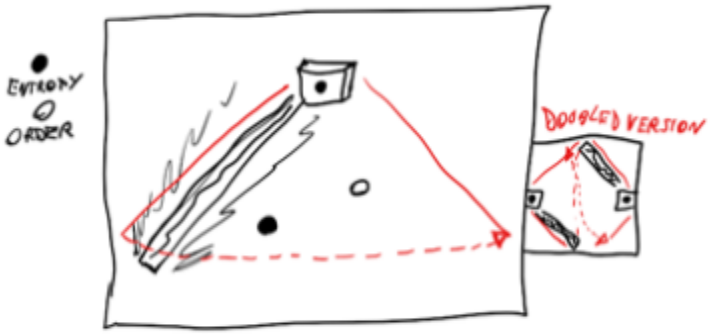
At first, it will wait a few seconds after the end of one attack before throwing again the die, but as the fight will progress, it will start to throw the die sooner and sooner, up to throwing it before the end of the previous attack.

In general, Sors will roam around the Arena most of the time.

Sors Attacks

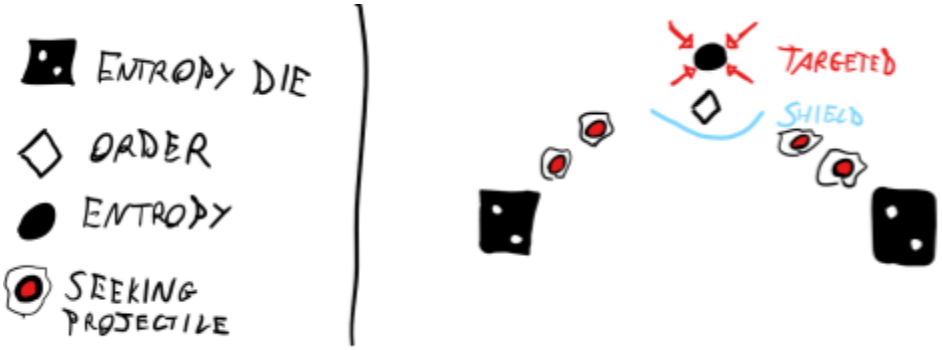
The dice results are not intended to have a 1d6 probability. Some attacks may occur more often than others. We just want to give the illusion of randomness.

1. **Shifting Beam**: Sors will shoot a beam moving in an arc, the beam will change element each iteration, so that both players will need to protect the other one to avoid taking damage.



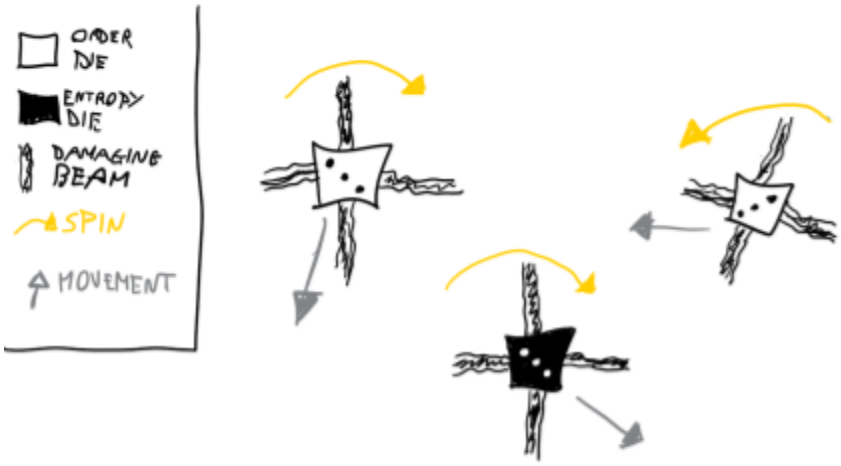
Shifting Beam, Sors' attack sketch

2. **Unavoidable Two:** two dice of the same color spawn on opposite sides, in the horizontal axis of the arena. They shoot player-seeking projectiles, which target the player of the opposite color.



Unavoidable Two, Sors attack.

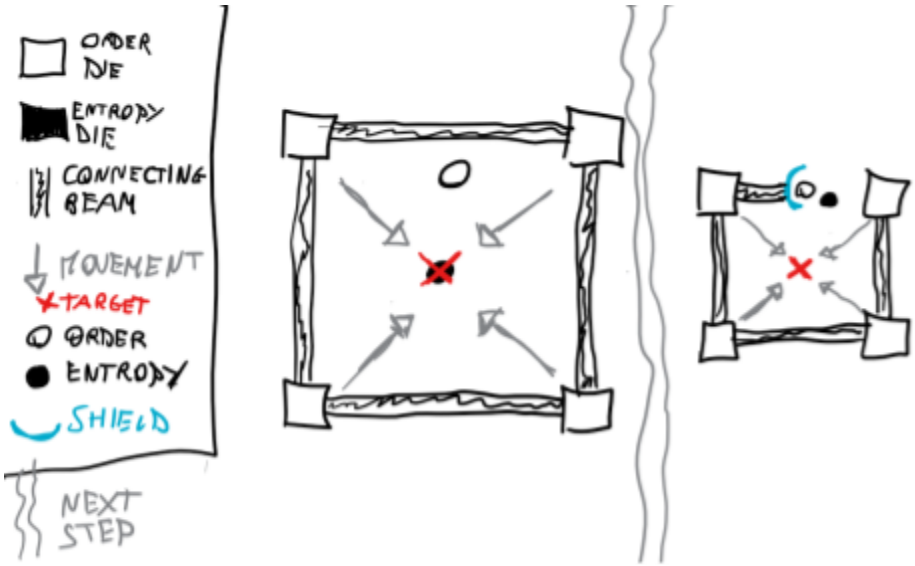
3. **Tri Spin:** Three dices will be released, each one of them will release four short-ranged lasers with different energies. These dices will begin then to rotate and randomly move around the field. Energy rays can be blocked by the same energy shield.



Tri Spin, Sors' attack sketch

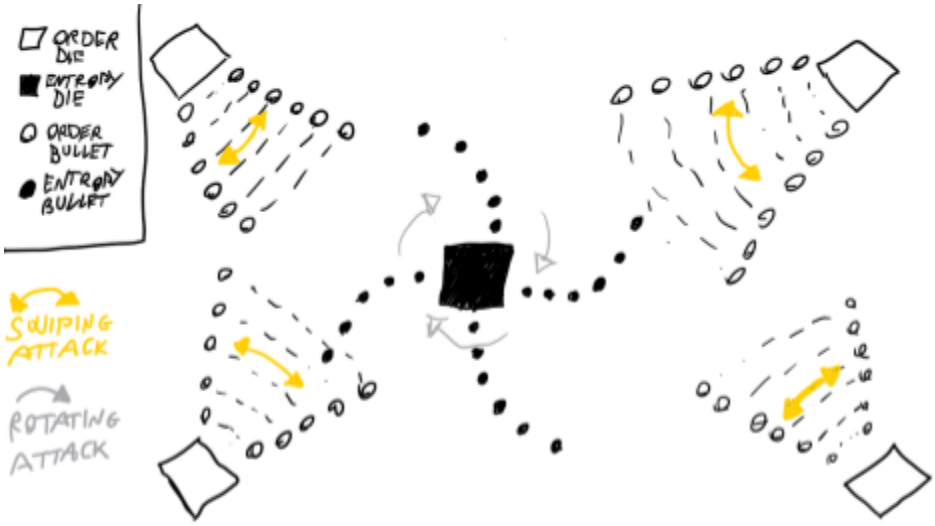
4. **Energy Pillars:** four pillars connected with an energy beam will spawn near the edges of the zone, targeting a character and following its initial position, they will gradually move towards the target, gap closing it. They will have the opposite element of the target. The player with the same element of the pillars must step over a pillar/interrupt the beam with the shield on,

allowing the other player to run away.



Energy Pillars, Sors' attack sketch

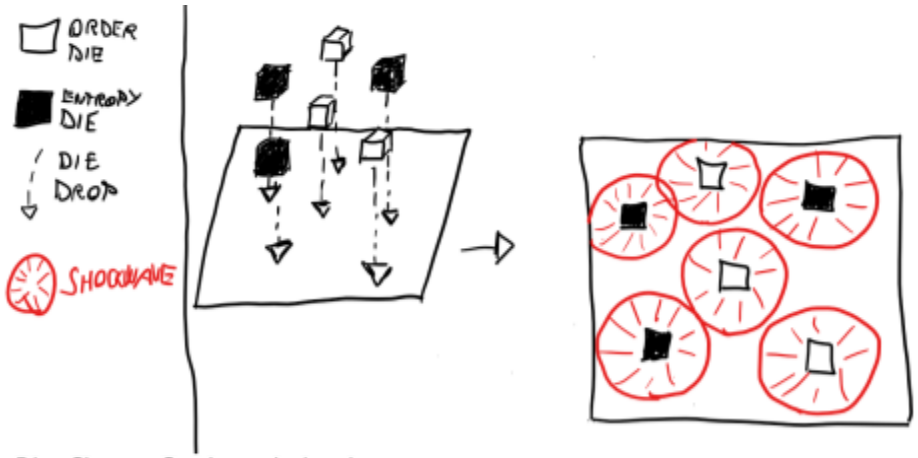
5. **Bullet Hell:** Five dice will spawn, four at the edges of the area and one at the center, respectively with opposite energies. After positioning, the dice will shoot several projectiles, the central one will shoot in all directions, rotating for 360 degrees, the others will shoot in a cone rotating at 90 degrees.



Bullet Hell, Sors' attack sketch

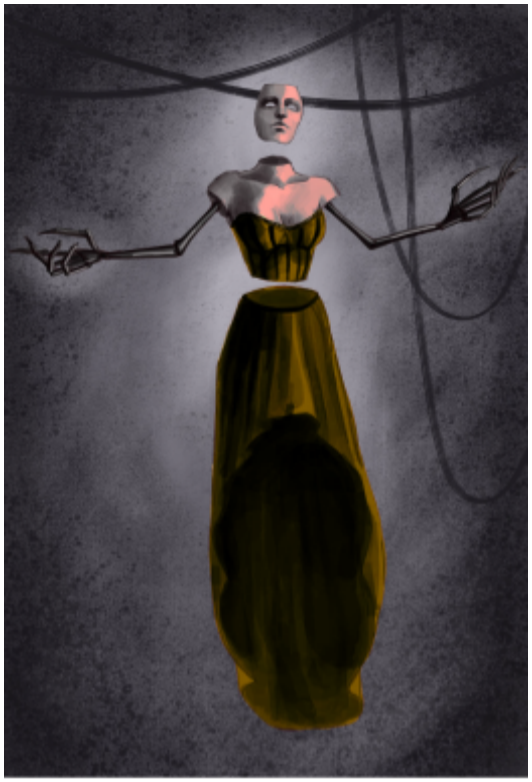
6. **Dice Shower:** Sors throws six dice that will arrange in different ways, after a brief delay, they will fall into the ground, **one after one**, and emit circular "shockwaves" (waves of projectiles) of the two different energies, depending on the particular die color. The player with the same energy of a shockwave can use the shield to make "holes" in the waves, letting the other player

survive to its opposing energy.



Dice Shower, Sors' attack sketch

Deceptio



Deceptio's concept art

Behavior

During the boss fight, the players will face two shifting phases, deception and portals play.

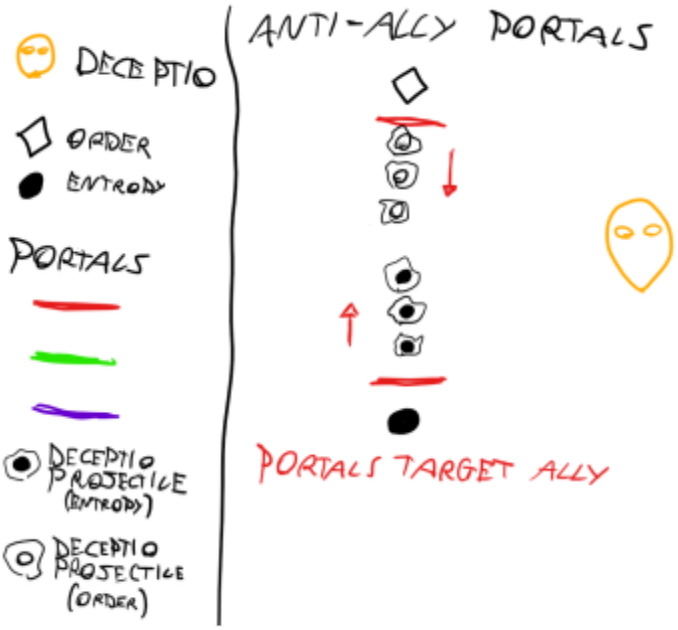
- **Deception:** Deceptio's body will fade, some typical Deceptio's arena props will spawn and the remaining Deceptio's mask will attach to one of them becoming that prop and fading after some time. All the props will then shuffle, allowing the player to follow the real prop in a similar way the Cups and Balls[8] game works. At the end of the shuffling, they will start to shake, warning their imminent explosion.
  Players have to figure out who the real Deceptio is and hit her, if they hit a fake, it will explode early.
  Upon the explosion of a fake, lots of projectiles will be spawned in a circle shape all around it, in this way, if the players fail to find the real Deceptio, it will be almost impossible to guard through all of them. The projectiles spawned during an explosion have the same energy of the fake that generated them, shown by its colour.
  In one of these Deception phases, the props in the scene will be clones of the main characters: in this other phase, the spotlights illuminating the arena will switch off for a short interval of time, when they will switch back on, there will be several players clones, which will act in a strange way: attacking with the sword, rotating, running or using the shield (they will be like players, so **they won't damage each other or the players. Furthermore, they won't charge their skills**). One of these clones will have the Deceptio's mask on it.
  If an Order clone is shot, it will run after Entropy, to try and hit it with the sword. Viceversa for Entropy clones.
- **Portals Play:** Deceptio's main attacks are based on portals. She will spawn different types of portals, with different behaviors. This will create less predictable attack patterns. There are three main types of portals:
  - Red Portals: spawn projectiles.

[8] https://en.wikipedia.org/wiki/Cups_and_balls

- Green and Purple Portals: the green portal is the entrance, the purple portals are the exit. There is only one green portal, which is connected with the purple ones. For each projectile entering the green portal one projectile is spawned from each of the purple portals.

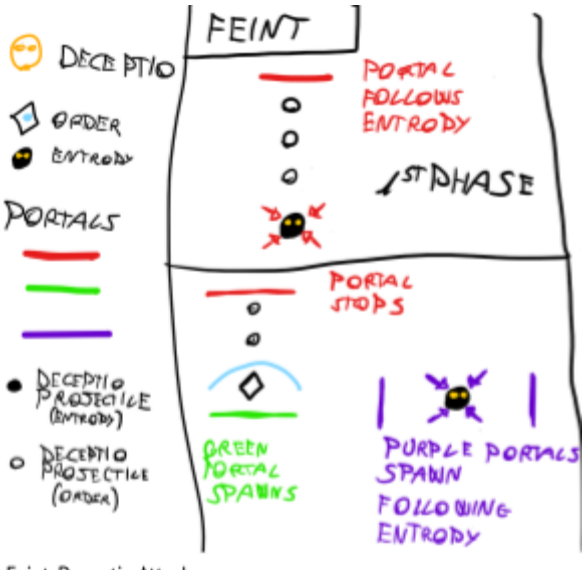
The following attacks show some combinations of portal behaviours:

- **Anti-Ally Portals:** one Red Portal will spawn near each player, constantly following him and aiming his ally, shooting projectiles powered by the opposite energy.
  This attack is meant to give panic to each player, that must run away from his companion.



Anti-Ally Portals, Deceptio attack.

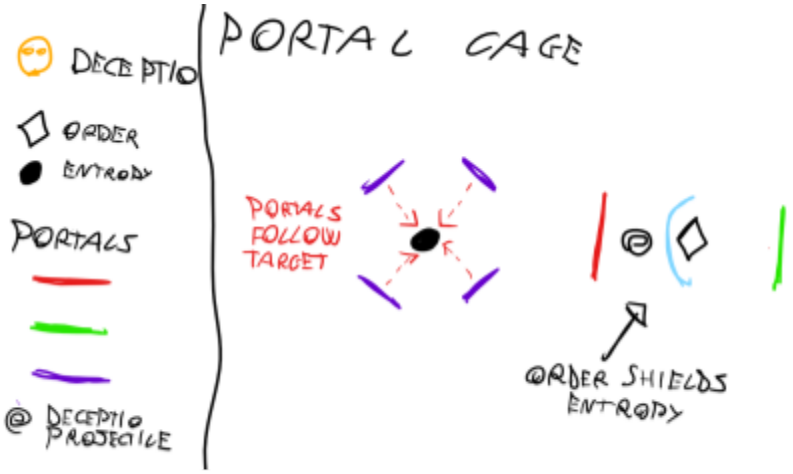
- **Feint:** one Red Portal spawns and constantly follows the targeted player, shooting projectiles of his opposite energy. After a brief delay, the portal stops following, one green portal appear next



Feint, Deceptio Attack.

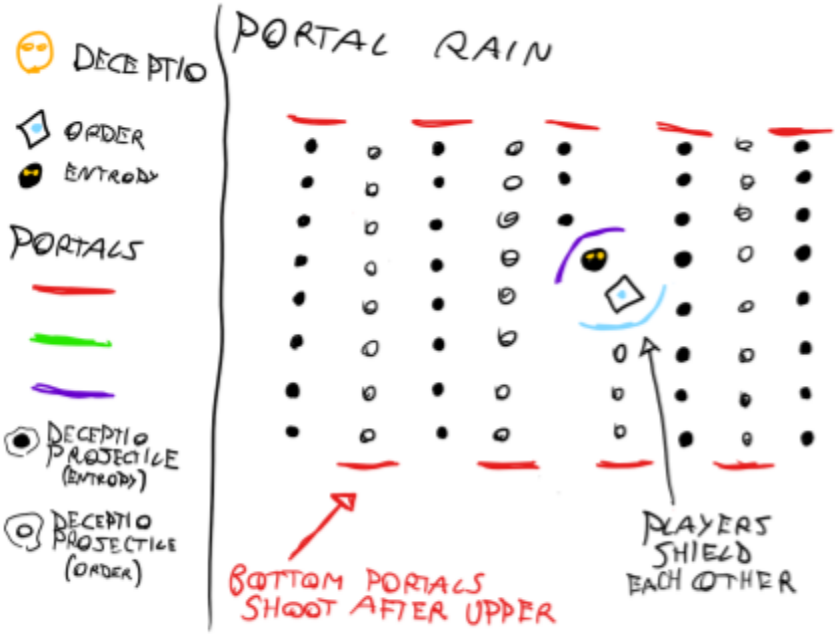
to it and, at the same time, two Purple Portals spawn near the targeted player. This attack is meant to introduce the Green and Purple Portals mechanic, pushing the non-targeted player to guard between those portals in order to protect his ally.

- **Portal Cage:** one player is targeted by four Purple Portals that constantly follow him. A Green and a Red Portal will spawn near one of the sides of the arena, with the red portal shooting projectiles of the target's opposite energy.
  This attack is meant to force the protection between players: the non-targeted player must guard between red and green portals to let his ally survive.

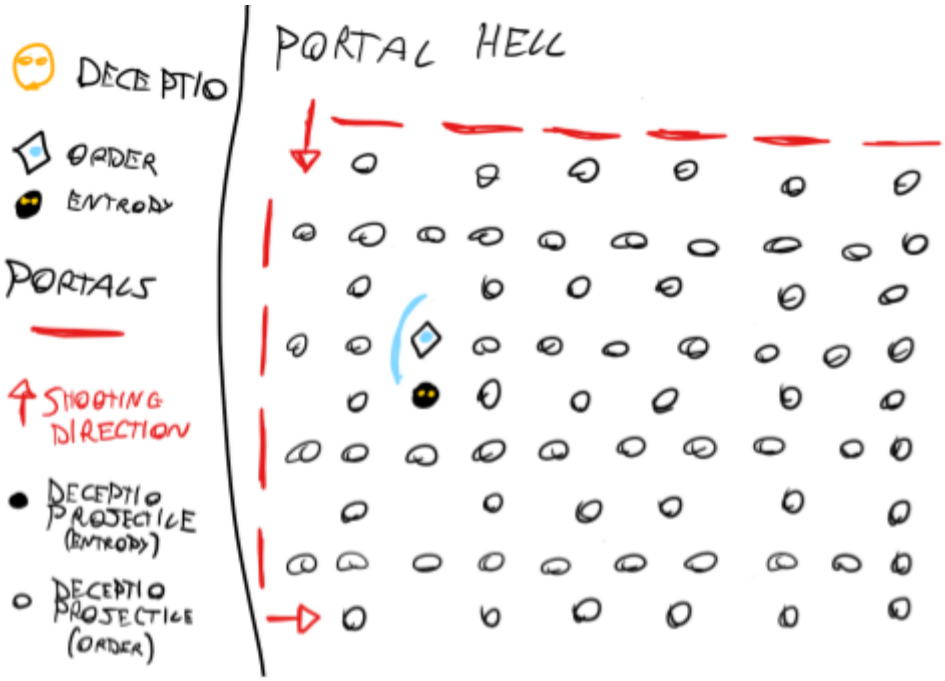


Portal Cage, Deceptio attack.

- **Portal Rain and Portal Hell:** these two attacks are meant to make a classical bullet-hell situation where players have to learn the projectiles pattern in order to find a safe spot.
  Portal Rain is more about good positioning, **Portal Hell**, instead, will spawn projectiles powered by one type of energy, ensuring that one player can always guard the other.



Portal Rain, Deceptio attack.

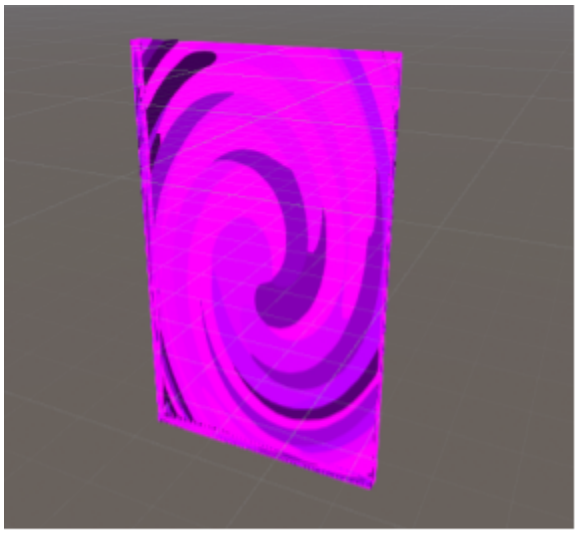


Portal Hell, Deceptio attack.

- **Rings of Death:** two Red Portals spawn and start to spin, shooting projectiles from both their sides and respectively powered by the two different energies. All the shot projectiles form two Rings near each portal and, when the latter stops rotating and shooting, they scatter all around. This attack is meant to push the players to "clear" the projectiles by absorbing the ones with their same energy type, avoiding their dangerous and imminent scatter.



Rings of Death, Deceptio attack.



Portal in game

Other Bosses

Bellum

Bellum is currently thought as a battlefield depicted like an ancient war chart with pawns and structures. Two factions here are at war, continuously trying to kill each other(one for each type of energy). The players will need to coordinate and damage both the factions so they can take both down in a short amount of time. If only one of the two factions is defeated the other one will prevail and will become too powerful to be defeated, killing instantaneously the two characters

Solitudo

A boss fight where the two players need to separate and act independently, each action influencing the other's side.

Life/Death (MISSING DATA)

They will be two entities, and we plan to make them behave like Order and Entropy: they will protect each other, attack together, and so on.

Bestialitas

Bestialitas is the embodiment of what is feral in humankind. Its bossfight should resemble a hunt.

Marcor

Marcor represents the Diseases, Pollution and everything which is unhealthy.

Lex

Lex represents the laws. Its Bossfight should be about putting constraint to players.

Additional ideas:
Internet, Sleep, Borders, Age, Ignorance, Corruption.

Areas

Each boss will have its own distinctive biome, representing their nature in some way.

To deepen the knowledge of Areas, check the GameWorld chapter.

Loot

Each defeated boss will give both players a **Module.**

Boss	**Loot**
Angor	No Loot
Sors	Laser
Deceptio	Mirror Shield
Bellum	Spear
Solitudo	Ally Hook Shield
Marcor	Trigger
Bestialitas	Charge
Lex	Hammer Blow
Life/Death	Balance

General Rules

PCs

- There is **no Friendly Fire**
- PCs share the same health bar.
- Once the health bar is empty, Characters faint and get teleported to the closest checkpoint. If they were fighting a Boss, that boss is reset to the initial state.
- Each PC is immune to an Energy and damaged by the other.
- Damaging a PC means decreasing the shared health bar for a set of points proportional to the damage.
- Order Shield can shield only White/order projectiles viceversa for Entropy
- If player's shield is hit by the opposite energy, the player character is stunned.
- Combined skills deal damage of both the elements.

Bosses (NPCs)

Currently, no NPCs will be present in the game apart from bosses.

- Every Boss has its own peculiar health value and Barrier value
- Once a Boss' health value reaches 0, it is defeated.
- Bosses are located in certain areas of the maps, and can't wander away from those areas
- Apart for possible future exceptions, **Bosses are powered by both the energies of the game. So they can produce attacks of both the energies, to damage both the characters.**
- **Bosses can be damaged by the opposite energy that they are using to attack.**
- For this reason, Bosses have an aura/barrier of the color they are using to attack, to give the players some hints on how to damage them and how they are going to attack.
- Players can't go to the Laboratory where the final boss is located until they have defeated all the other bosses.

Projectiles

- White projectiles do not deal damage to Order or Order Shield or to the White barrier of the bosses, viceversa for black projectiles
- Projectiles will fade upon hitting obstacles or the walls of the various boss areas.
- Some bosses may have projectiles with different behaviours and rules and also special obstacles that will affect projectile's trajectory, these can be found in the proper boss description chapter

Winning Conditions

Once a boss has been defeated, players win the fight and obtain the module related to that boss, as previously stated in the Loot subchapter.
Once all bosses have been defeated and players make the final choice (check Story Chapter), they complete the game, unlocking Leaderboards and time trial.

Statistics and Numbers

These statistics will be very volatile. We plan to make several changes after playtests.

Players

Health Bar: 500 hps.

Player Skills statistics

Time to charge Ranged Skill: 0.8 second.
Time to charge Melee Skill: 1.3 seconds.

Skill	Damage
Basic projectile	10 hps
Basic melee attack	7 hps
Energy ball	30 hps
Wide Slash	35 hps
Homerun	60 hps
Explosion	50 hps
Sparkles	10x7 hps

Bosses

Angor

Health Bar: 300 hps
Barriers Health Bar: 90 hps

Angor Attacks	Damage
Projectile	45 hps
Laser	45 hps on hit, then 50 per second

Sors

Health Bar: 450 hps

Barriers Health Bar: 90 hps

Sors Attacks	Damage
Projectile	25 hps
Laser	30 hps on hit, then 30 per second

Deceptio

Health bar: 500 hps

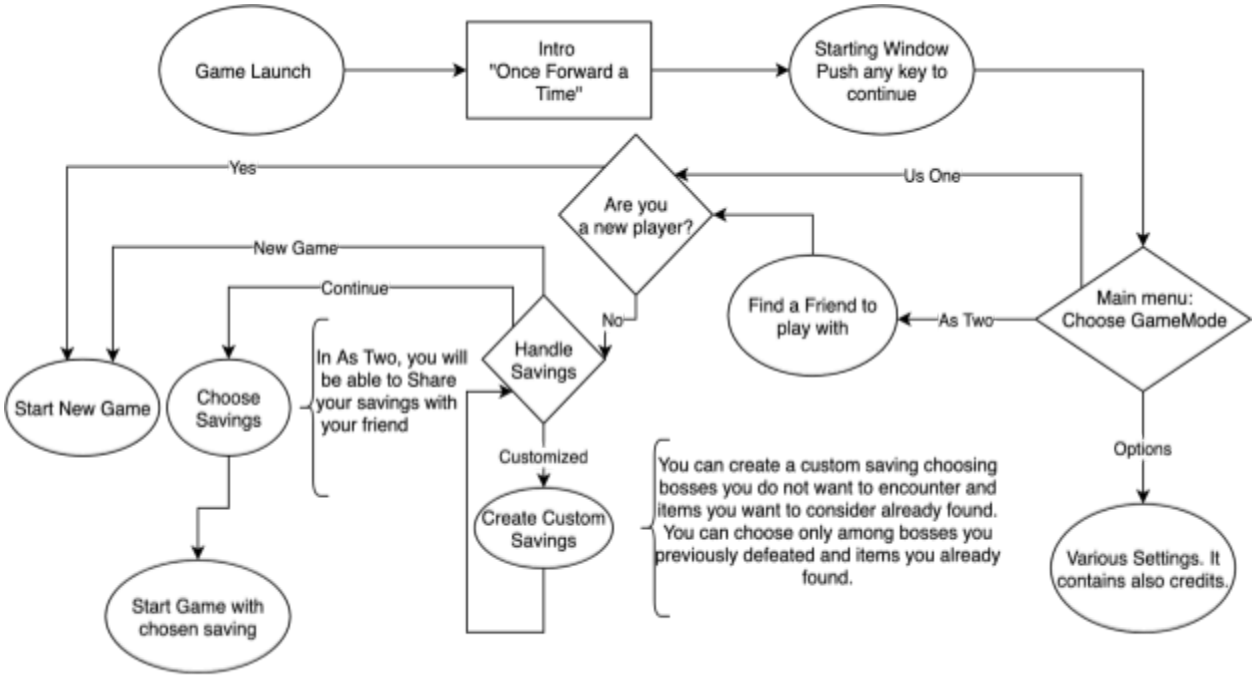
Deceptio Attacks	Damage
Projectile	20 hps
Fake Prop Explosion	50 hps
Deception Phase lost	200 hps

UX

Flowcharts

From an exploration point of view, players will be able to go where they like, we are not planning to introduce gates or so on, we don't need flowcharts for this part.

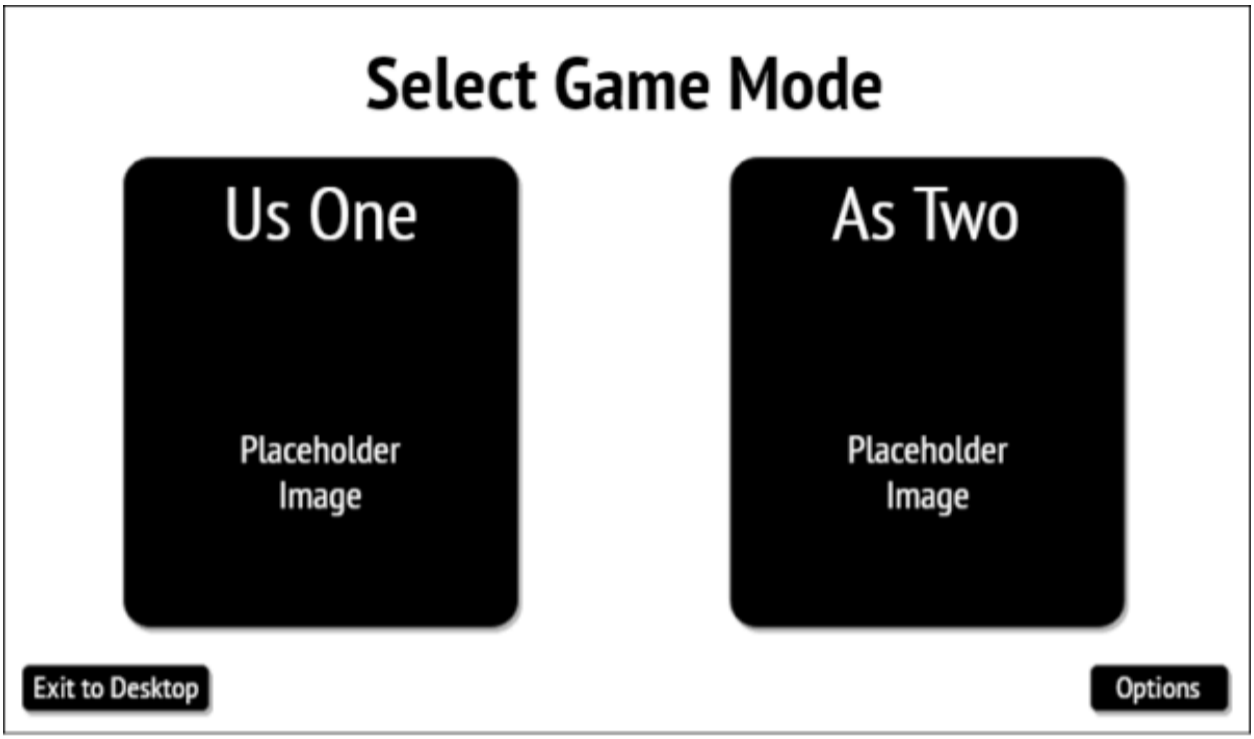
Start Game Flowchart



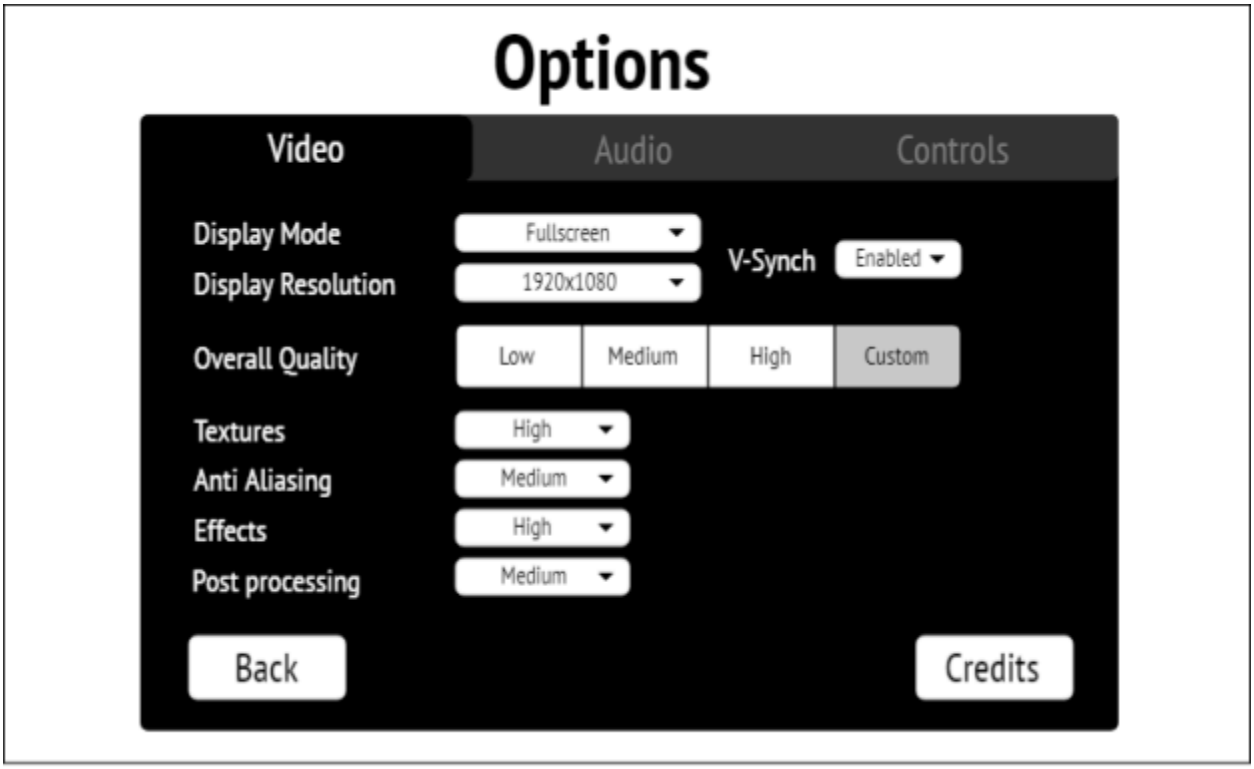
Flowchart showing the menu's navigation since the start of the game.

Detailed Interfaces designs and Detailed Options follow.

UI Sketches



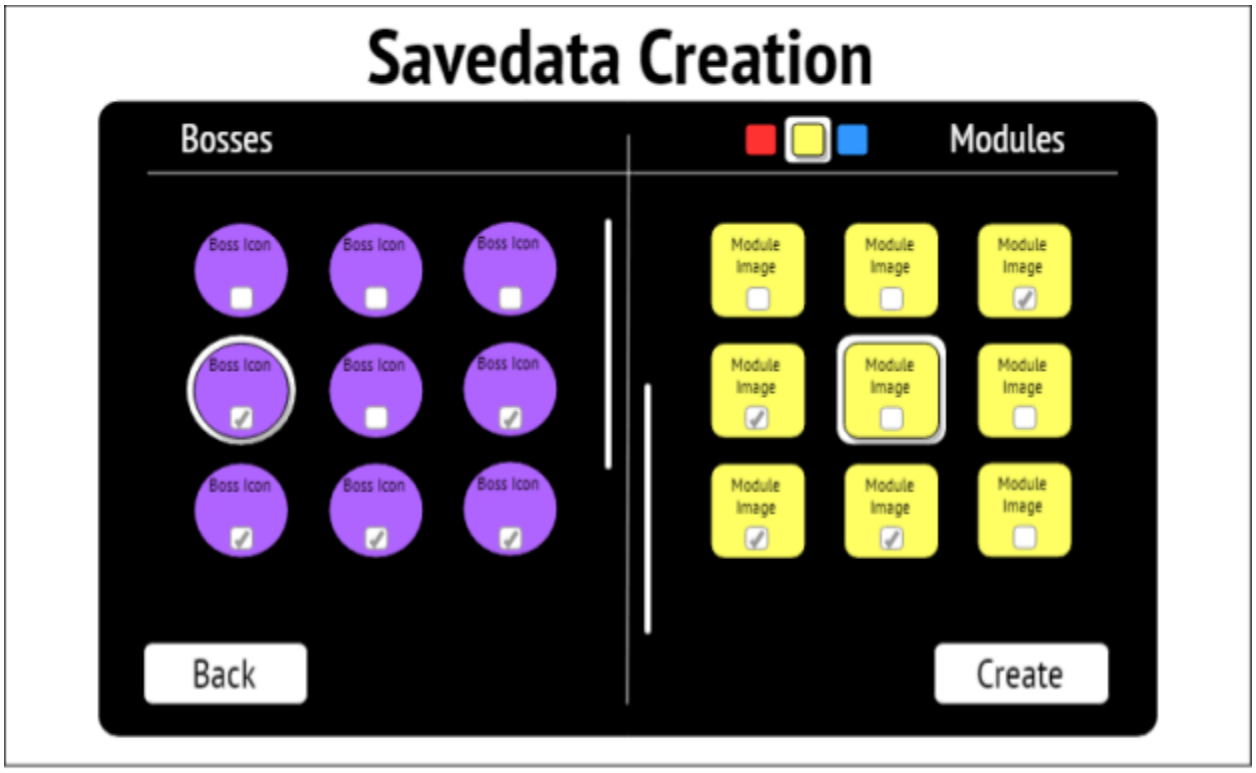
Game Mode selection screen.



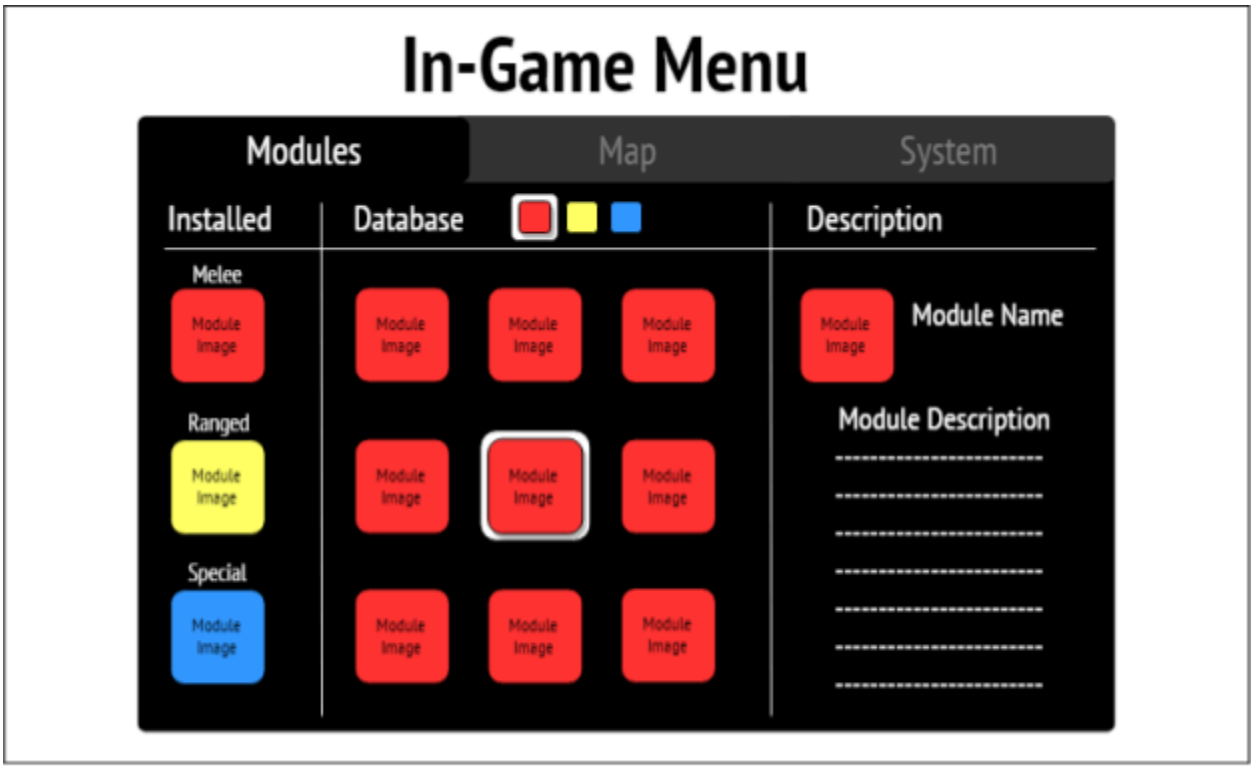
Options management screen, Video Section.



Game Mode screen, **Us One** and **As Two** screens will be the same.



Savedata Creation screen.



In-Game menu, Modules section.

Further Details

Options

The **Audio** Section will contain the following options:

- Background Music Volume
- Effects Volume
- Master Volume
- Enable/Disable Voice Chat

In the **Controls** Section players can customize the **key bindings** for all the character's actions.

Game Mode

In this section, players can **share save data** with friends and also the "x" after the "Defeated Bosses:" sentence will be replaced with tiny, peculiar **Boss Icons**.

Savedata Creation

As stated in *Matchmaking and Game Modes* section, players can make a new Save data by choosing **Bosses and Modules** they want already beat and acquired, **Modules** can be **sorted by type** with the three coloured boxes in the image.

In-Game Menu

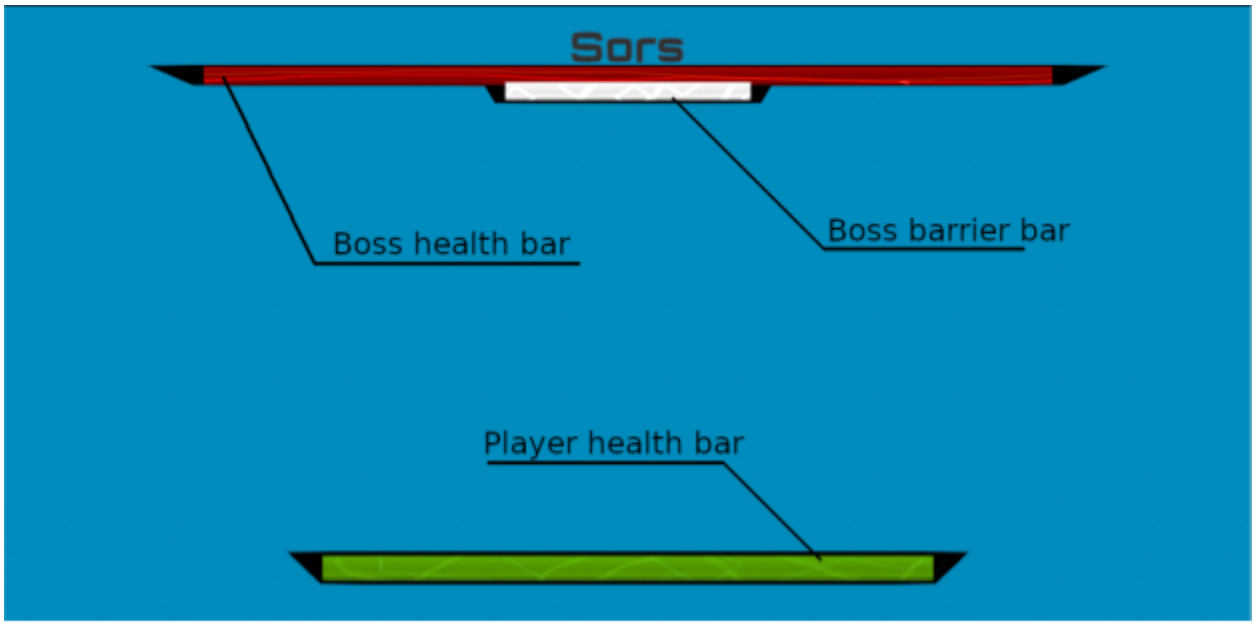
This Menu is opened upon pressing the **Options** key in any time of the game, this will not pause the match.

In the **Modules section,** players can equip the modules they want and read its descriptions, they can also **sort** them by type using the coloured boxes in the image.

The **Map section** will show the entire world map with the possibility to **select checkpoints** for teleporting and the **System section** will show some options and buttons for leaving the game.

HUD

The HUD will be essential: in-game scenes will be quite complex to "compute" for the human eye, for this reason we want the HUD overlay to be as little as possible.



Boss fight HUD.

All the 3 health bars are emptied from right to left.

Matchmaking and Game Modes

Since playing with a stranger can't be by any means similar to playing with a friend, we want to propose **two slightly different experiences**, to emphasize what is interesting in each of the two cases.

There are two multiplayer modes, **As Two** (play with a friend) and **Us One** (with strangers).

In this case for "Saving", we mean a data storing a list of defeated bosses. Each player can have multiple savings and can create new ones freely, as already seen in the UI chapter.

As Two

As Two is the mode we designed this game around.
Play with a friend, share everything, explore the world together, keep your progress in common.

You will invite a friend through Steam to play, then you two, independently, will choose:

1. To start a New Game.
2. To continue a previous game (loading a Saving, you can also **share** a Saving with your friend)
3. To **create** a Saving: You can create a custom saving choosing **bosses** you do not want to encounter and **modules** you want to consider already found. You can choose only among bosses you previously defeated and items you already found.

If the two players choose 2 or 3, then the game will make an intersection of their savings: Players will keep any item they want, but the only bosses that will be considered defeated in the world, will be the only ones that both have defeated in their savings.

Game Start and Camera constraint

Once the game has started, both players will be spawned together in the first checkpoint, from this moment on they will have complete freedom in exploring the world, together (The camera will force the players to explore the world together).

Checkpoints and Teleports

It will be available a teleport system (in the menu) to the checkpoints that have been visited by at least one of the two players. If performed during a boss fight it will reset the boss' condition. This teleport will take a few seconds to perform.
The teleport will work on both the players: for this reason the player who has not activated the teleport will be asked to accept to teleport, if she refuses, both players won't teleport.

Us One

Players feel like part of something bigger: sometimes they are alone, sometimes they fight bosses with other people, sometimes they see other people roaming close to them. The moments of loneliness make players fully appreciate every encounter they have. They feel part of a living game.

Us One is an alternative mode: to play with strangers.

The player will choose a Saving and the game will start. Here we propose a slight shift in the experience:

- **Exploration:** the player will explore the world alone, **but she will be able to see ghosts of other players playing in her surroundings.**
- **Fights:** once in the surrounding of a boss the player will be matched by a **matchmaking** algorithm (hidden to the players) with another close player, chosen considering:
    - Time in game
    - List of defeated and undefeated bosses

  Once paired, the two players will remain coupled until one of them leaves the Biome/the Boss Area.

In Us One, Resonance Aura is a longer boost, and it is triggered once met another player roaming.

Disconnections and Empty servers

Since the experience is intended as exclusively played with another person if there are not enough people to find someone to play with the game will just put your character in stasis until someone appears.

If your companion disappears and disconnects from the game while you are facing a boss your character will be put in stasis as well waiting for the reconnection. After a while, if there is no reconnection you will be given the possibility of "asking for help". This will randomly select someone in the area around that boss and give him the possibility to join your game to help you (knowingly starting to play the boss fight from the middle). We plan on putting achievements and maybe some other visual perks to the players who often helps the other. The stasis is a freeze of the game screen with an effect applied.

Camera Direction

During fights, the view is placed above forming a small angle (similar to 3/4 top-down view).
We are currently debating if and how to change the view (to pass to a generic 3D third person camera) during the exploration.

That's because exploration in 2D requires well-detailed environments to be enjoyable, while fights in 3D are completely out of our focus.

The last proposal is to make the **whole game camera in top-view, which is tied to the decision to make the world less dispersive, so smaller but more concentrated.**

Replay Value

Apart from the two game modes providing different experiences, we intend to give two more reasons to the players to continue to play our game: Achievements and Leaderboard/Time trials.

Achievements

Name	How	Why
Angor	Defeat Angor	Progression Reward
Sors	Defeat Sors	Progression Reward
Deceptio	Defeat Deceptio	Progression Reward

Bellum	Defeat Bellum	Progression Reward
Solitudo	Defeat Solitudo	Progression Reward
Marcor	Defeat Marcor	Progression Reward
Bestialitas	Defeat Bestialitas	Progression Reward
Lex	Defeat Lex	Progression Reward
Humankind	Restore Humankind	Progression Reward
Ascension	Destroy the Machine	Progression Reward
Us One	Use all the combined skills	Exploration Reward
As Two	Shield 10000 damage	Reward good gameplay
Augmented	Discover all the skills	Exploration Reward
Help!	Answer a call for help and defeat the boss, 3 times	Push Mechanic
Checkmate!	Discover all checkpoints	Exploration Reward
Master Sword	Deal 2000 damage with the charged Sword	Reward good gameplay
Baseball?	Deal 2000 damage with Homerun	Reward good gameplay
Together	Defeat a boss dealing damage only with Combined Skills	Additional Challenge
Wa/onder	Discover all the biomes	Exploration Reward
Useless Risk	Defeat a boss without using the Shield	Additional Challenge
Connection	Meet 10 people in Us One mode.	Push Game Mode
Essence	Use the first combined skill	Push Mechanic
Standing	Defeat a boss without using the Dash	Additional Challenge

Samurai	Defeat a boss without using ranged skills	Additional Challenge

Leaderboards and Time trials

After completing the game, players will unlock the possibility to check the time they take in defeating bosses. We will rank top player times and the leaderboard will be shown in a new section of the in-game Menu. As you can read in chapter 5.1 of the Technical Design Document, we will provide access to the leaderboards also in our gamesite.

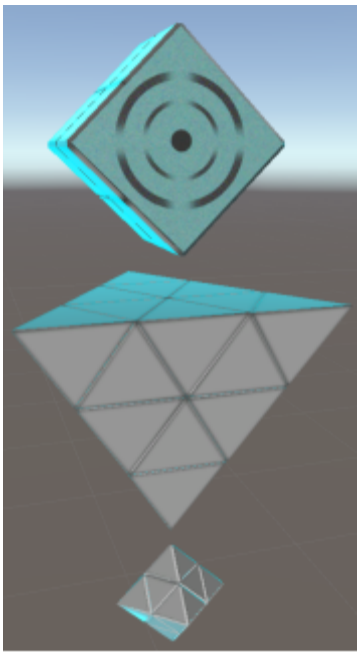
Characters

Characters design

According to the lore, every entity or character is powered by the same two energies, respectively representing order and chaos. The two named characters are the only ones powered only by one type of energy. So they will have the energy's color as a dominant feature (black or white). This is also why they need each other to survive.

All the other creatures that populate the world are bosses. These creatures are powered by both entropy and order (sometimes not in a balanced way). This means that they will have to display both energies' colors. Each of them will also have a distinctive palette for the environment that surrounds it and certain colors to give a sense of uniqueness.

PCs

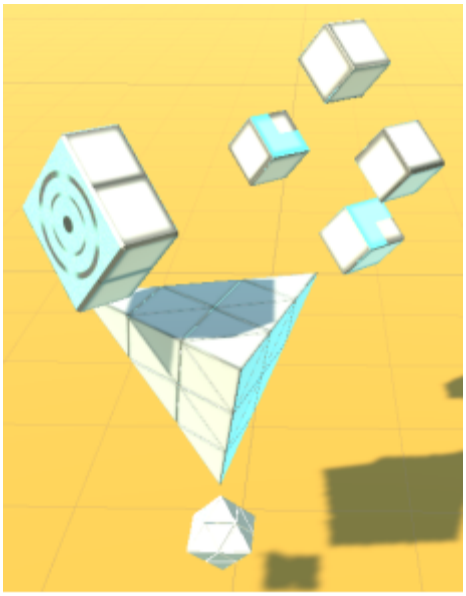


Order, 3D Model

The two main characters are two little robots who have the task to explore the world and understand what happened. These are named as the two energies of the world they embody: Entropy and Order. Their design is similar, a little floating robot in a huge lonely world. There are some differences in the style, Entropy is black and has a rounded morphable body similar to liquid metal, with more intricate and “chaotic” patterns used for decoration, she will also seem pretty "unstable" rapidly expanding her shape like a glitch, returning normal in the blink of an eye. Order is white, his body is a reverse pyramid composed of other pyramids with a floating octahedron below, composed of pyramids too. Order’s head is a cube with a big display showing his “eye” and all his components have cyan reflections, also he's used to move his pieces in various ways, recomposing himself immediately after.



Entropy, 3D Model



Order's “Head Displacement” animation frame.

They will use the energy to do everything, like Green Lanterns. Entropy will have purple/black energy, Order will have white/light blue energy. They will build shields, swords, projectile, etc out of pure energy. Their skills, like sword, shield, and others, will differ not only for colours but also for their shape.

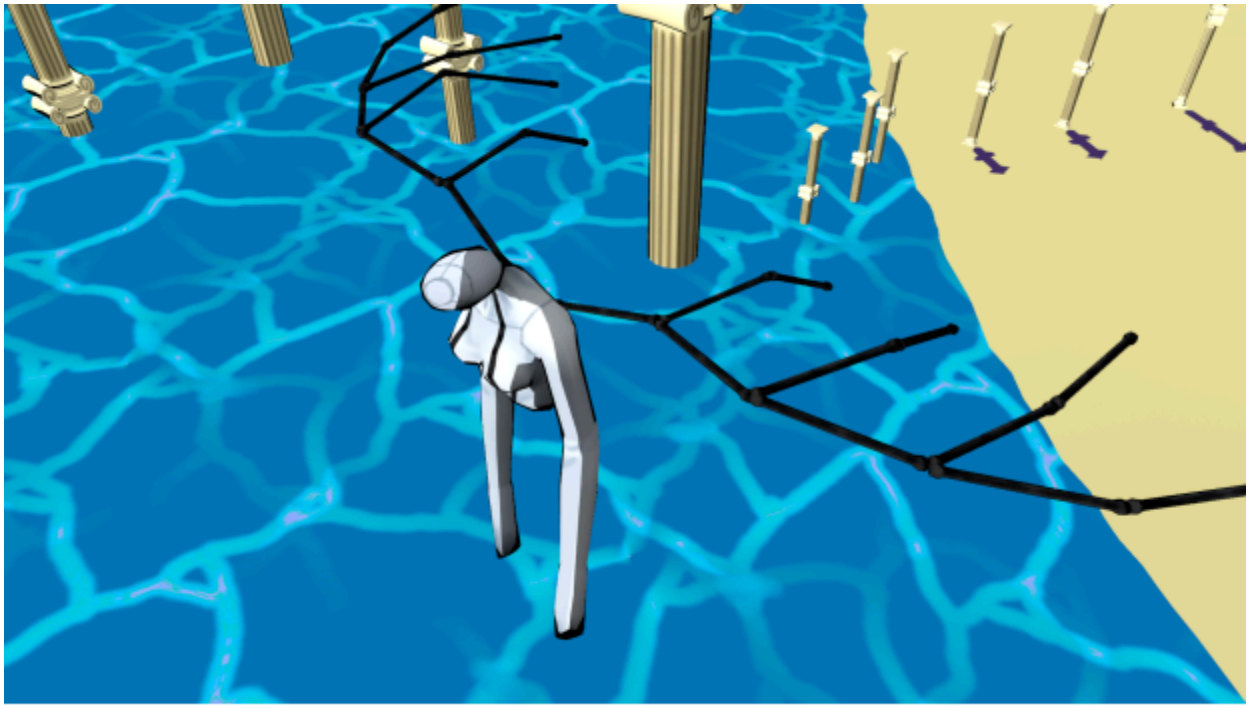
Their movement is fluid, they are represented as perfectly functioning, without any powering problem.

NPCs

The only NPCs to be found in this world are the bosses.
We could also have some fauna scattered across the map.

Angor

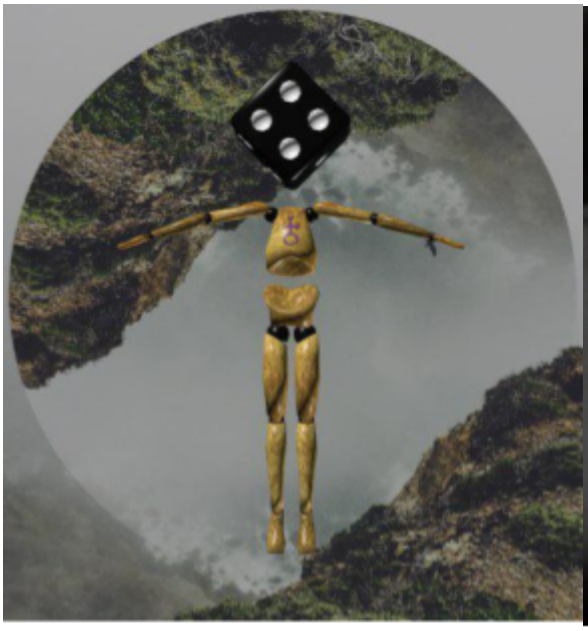
This boss is the embodiment of pain, sadness, anguish.



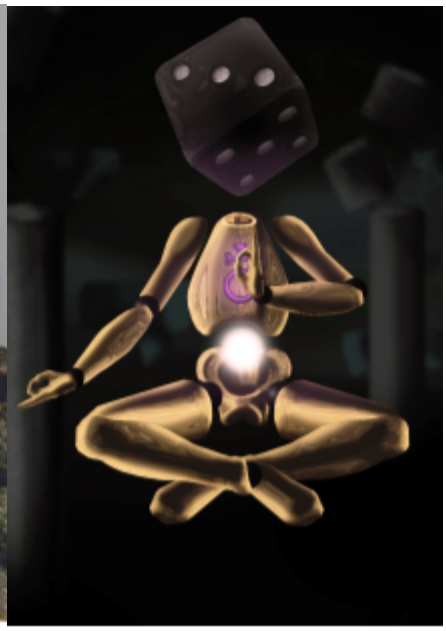
Angor, in-game Model.

The character design of the boss represents a fallen, defeated angel. A lot of aspects represent this fact, and the concept of the boss itself: Skeletal wings, black stripes starting from its eyes, and tilted down head.

Sors



Sors 3D Model.



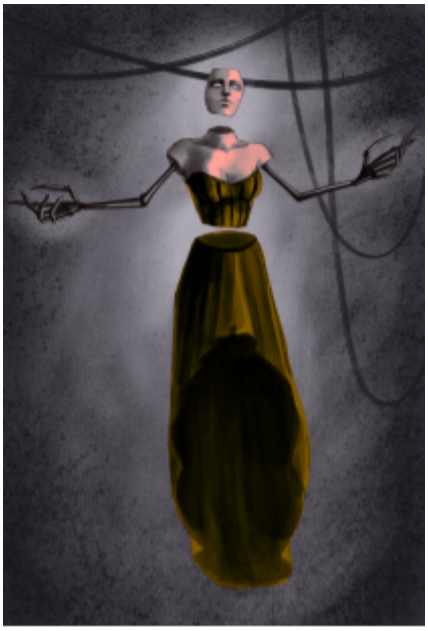
Sors concept, meditation pose.

This boss is the embodiment of Chance, Random and in general that part of humans that try to look for experiences with uncertainty and out of control events.

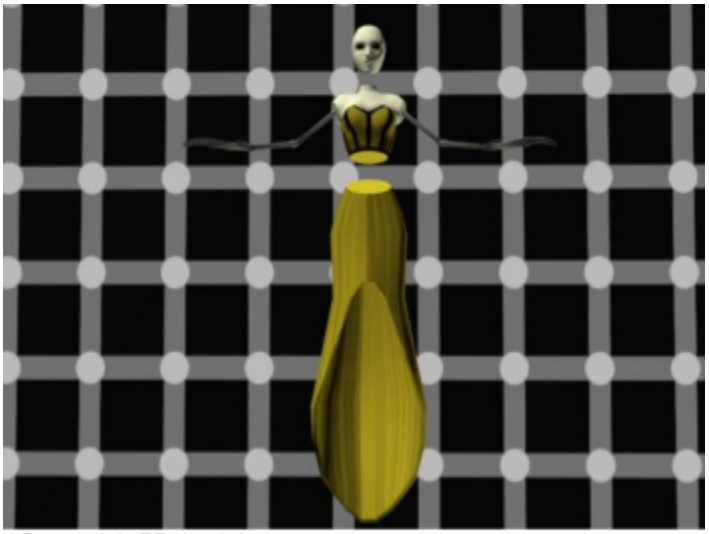
The more archetypal symbol for chance is the six-sided dice, this will be his head. The head is currently thought and depicted as a black dice with white dots. His body is represented by a mannequin, symbol of the lack of control inherited by events with a high degree of chance.

The body has wood's colour with some purple symbols.

Deceptio



Deceptio's concept art



Deceptio's 3D model

The entity representing all the mischiefs, deceives and deception of the human race.

This boss will have a feminine appearance, the parts of the body will be separated. The face will be a neutral and completely white theatre mask, while the body will be composed by the torso, white and wearing a corset with black details; a skirt and long and creepy steel arms.

The skirt, when animated, will allow serpentine slither movements. The chosen color for the skirt and the corset is yellow, representing Judas, deception and betrayal in the Christian iconography tradition.

Story

Once Forward a Time...

Synopsis

Us One, As Two is set in bare planet earth, which has been abandoned by human beings, who have ascended and left the planet. The world is now inhabited only by few eminent creatures, representing everything humankind has left ascending: technological discoveries, abstract concepts (like sins, law, emotions, hope).
The protagonists are a couple of little robots, powered by two opposite energies: Order and Entropy. The two characters symbolize two parts of the same essential being, this makes them strongly bounded and dependant. Their mission is to explore the world to understand what happened and why humankind left them alone.

Complete Story

Premise

The humankind has ascended and has forever left the planet, leaving behind only spare traces of his existence in a world that is becoming more and more reclaimed by nature as the time passes. Two little robots, part of the same system (or entity, or individual), but powered by opposite energies, travel the world together, trying to understand why Humankind has left them there in a savage world dominated by eminent entities.

Development

The two little robots, roaming around the world, find several clues about the disappeared society.
Boss after boss, clue after clue, they learn that each boss they meet is the incarnation of some concept the Humankind removed from itself, through a strange Machine, **controlled by an unknown committee.**

They learn what humankind did the first time the machine was used, their reactions, that most of the people understood the power of the machine, and accepted its use.

After defeating all the bosses but Missing Data, they discover where the machine is located and finally they discover what was their true duty: to make a backup copy, stored in their memory, of all the ripped Concepts to bring it back to their main base, waiting for the day it will be useful.

Conclusion

In the laboratory where the machine is placed, they meet the final concept the humankind left: "**MISSING DATA**", Life/Death.
After defeating the final Boss-Concept, the players discover that Humankind has ascended.

Now, players can choose what to do with the Machine:

1. Use the machine to bring backs humans
2. Destroy the machine to prevent other entities to use it

After this choice, they will return back to their base, after having fulfilled their duty.

Backstory

Humans discover a machine that allows them to take something away from their life, or to remove the need for an object or, in general, something concrete. Slowly the machine evolves, humankind gets to eliminate ideas, information, until the point of completely eliminating the concepts of the human culture. In the game, we meet different types of these concepts, which have incarnated into strange creatures, and we discover in reverse what humans have eliminated and why, how they did it.
In the end, the story is that men are increasingly pushing this drive to eliminate something from their lives, something they perceive as harmful. They start by removing chance, then mischiefs, wars, hunger, envy, desire. In the end, they achieve to remove their own mortality, their contact with the material world, ascending.

Narrative devices

The major narrative devices that this game uses are descriptions of skills, of bosses and eventually of places and objects. They will be different between the two main characters allowing the backstory of the world to be unfold following two different perspectives.

We could have some cut-scenes in very few key moments of the game.

The Game World

Overview

Us One, As Two's world is an abandoned planet Earth without war or other disaster evidence, just like mankind left in the blink of an eye, during an ordinary day.
The game is set in an isle, surrounded by the ocean.

Where present, buildings, and architectural places are inspired by contemporary architecture, with light colors, mainly white, and light wood.





Us One, As Two's urban area concepts. Their purpose is to highlight the color palette and general mood.

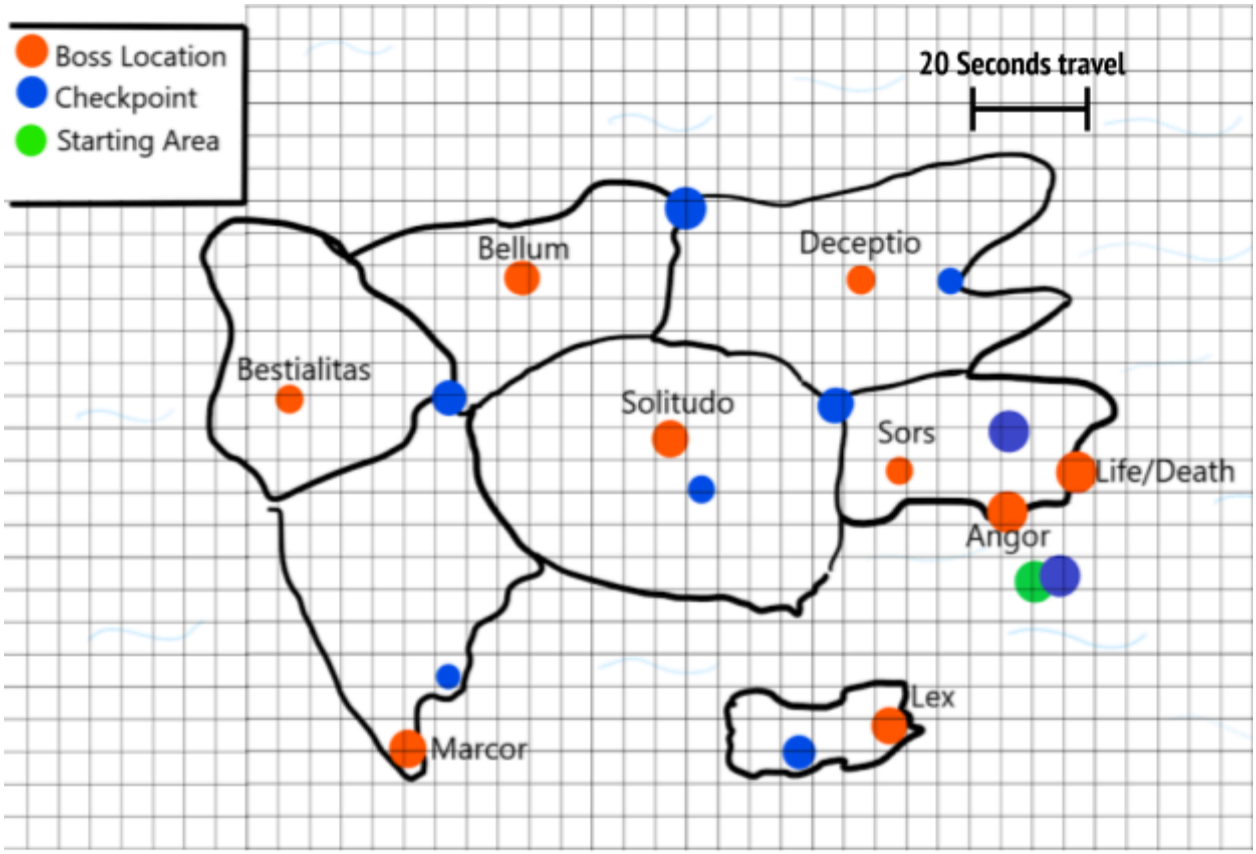


Reference picture for urban areas

What really gives variety to the game world are all the boss areas. Each boss will influence its surroundings with the core concept it embodies, this is why players can find frozen or volcanic landscapes, destroyed cities or peaceful paradises and even unearthly places.

From a narrative/UX point of view, *Environments are the most important way we have to introduce our boss-concepts.*

Map, Scale and Key locations

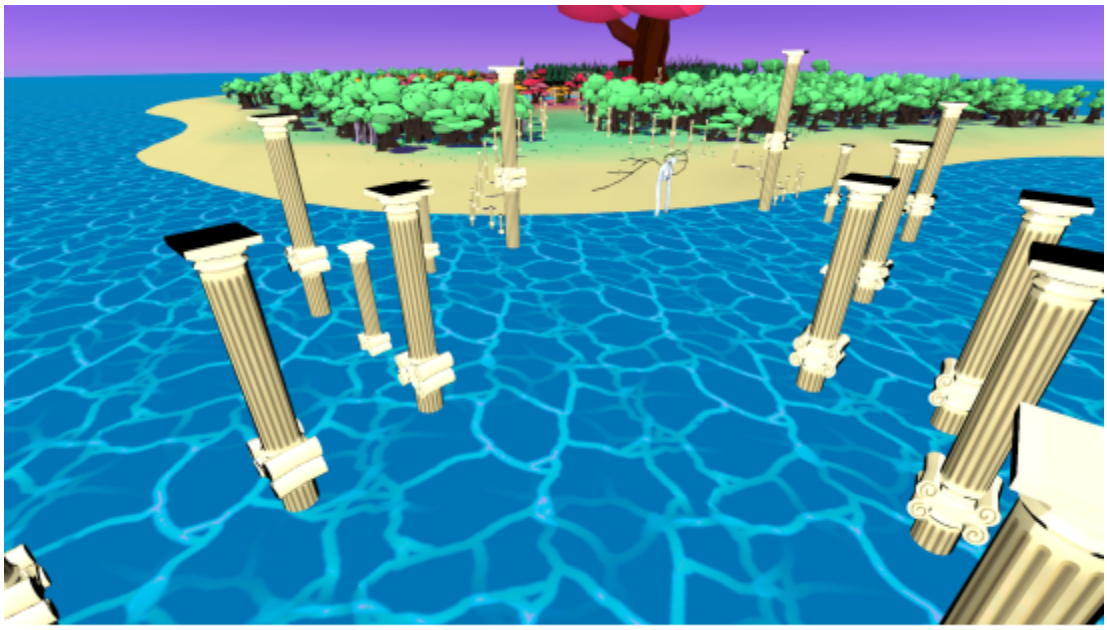


Game World, Scale and Key locations.

The map is quite small, we plan to make the path from one side of the world to the other 2 minutes long. It is interesting to underline that neighbouring bosses are always in some way related, e.g. Bellum with Deceptio, and Bestialitas.
Retaliation: Solitudo's biome is at the center of the world, neighbouring to every other biome.

Angor Biome

Angor biome is very small: it corresponds only to the boss area. The boss can be found in the middle of the sea near the starting area, in an area surrounded by ancient greek columns.



Angor's Area

Sors Biome

Sors, the embodiment of Chance and Randomness, will have a solemn biome with a lot of both abstract and realistic elements even unrelated to each other.



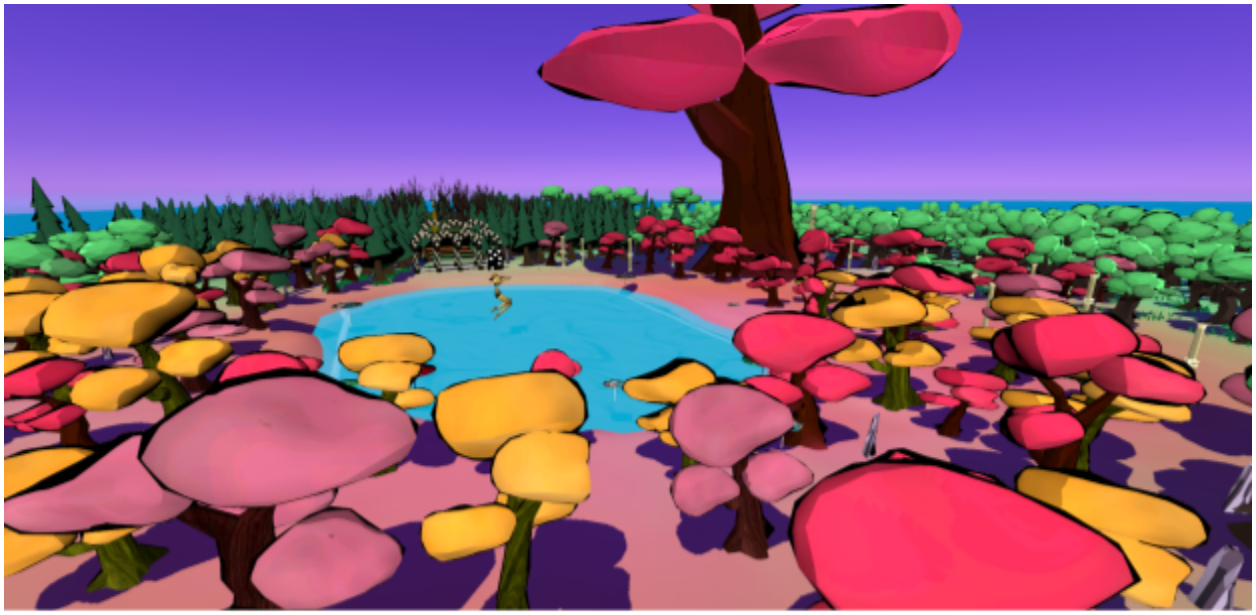
Sors' Biome concept, highlighting its mood and eastern props.

We want to make the player feel **oriental vibes** while roaming in our biome.

The entrance to the biome combines the style of the elements of Sors biome with the contemporary lines of the main area, creating contemporary temples combined with modern components as windows and impossible floating floors. Vegetation will be highly present, the color of the leaves will be unnatural, mainly purple.

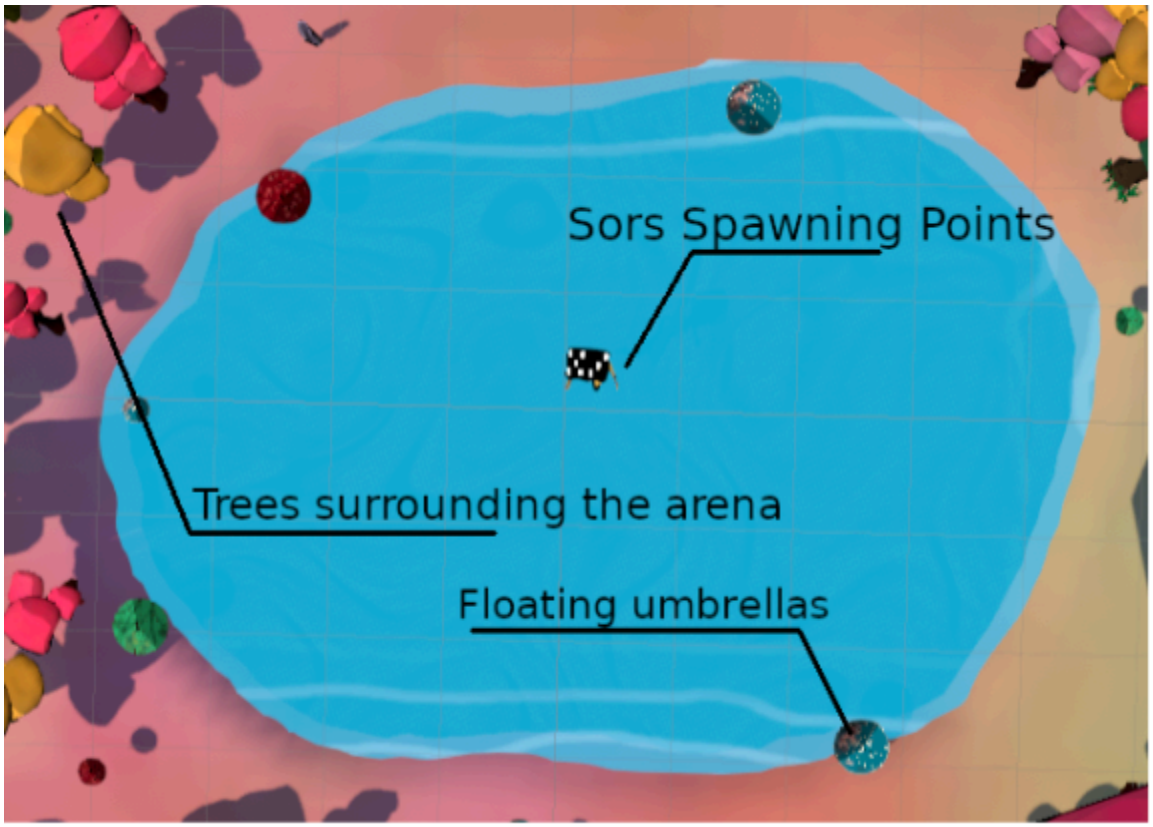
The areas inside the biome will be almost steppe since it is located halfway between Solitudo's desert and the sea. The elements that could be found, like floating fishes, umbrellas, glass spheres, may be found in

very different dimensions (e.g. a colossal umbrella), to give a strong sense of randomness.



Sors' Biome

Sors Arena



Sors Arena from above.

The arena is placed inside a Pond. In the final game this place will be connected through a small path placed north the Arena, it will be completely empty. Upon entering this area the walls will start appearing and after they have become fully visible Sors will rise from the water and the battle will begin.

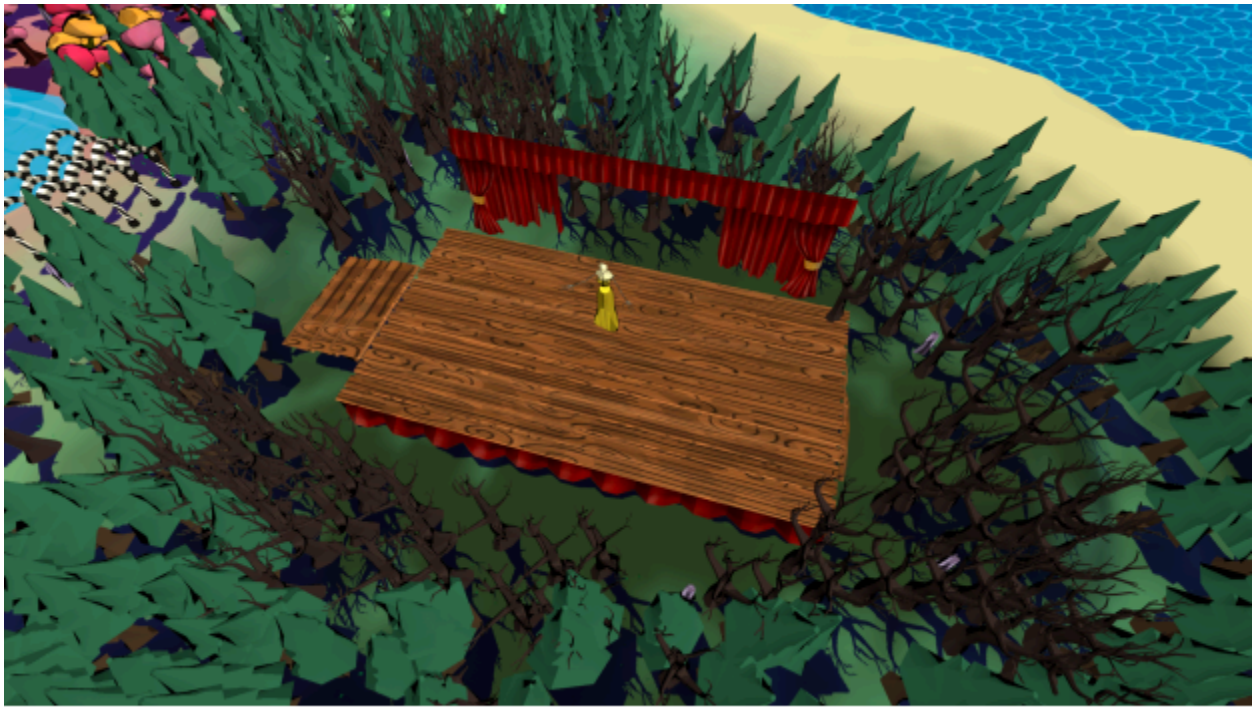
In the prototype we'll teleport the players inside the arena with both boss and walls already there.

The arena is surrounded by colored trees and floating umbrella(that won't be visible during the battle)

Deceptio Biome

The main mechanic behind Deceptio biome is, of course, the deceit. We think the natural setting should be a dark forest.
As the Sors Biome is a mix of oriental waves and the random concept, Deceptio Biome is a mix of Andalusian architecture and optical illusions/deceit.

Deceptio will be found in a theatre at the center of the biome.



Deceptio's Biome and Arena

Deceptio Arena



Deceptio's arena concept.

Deceptio's arena is a theater. She will be found at the center of the stage. But the boss fight will take place inside the whole theater.

In the area will be several props related to the context: wooden chairs, wooden trunks, the red curtain.

The scene will be illuminated by flickering headlights.

From the backstage will come out smoke (as if it is produced by smoke machines).

Other Bosses Biomes

Bellum

The surroundings of the embodiment of War are heavily altered by the endless battles of two huge armies. Bellum's biome is a vast war-torn plane with any kind of vehicles and weapons from any age, destroyed and left on the ground; some burnt or destroyed trees can be found, but no fauna is present. The dominant feeling of the ambient is despair and smoke, fire and destruction reign all around.

Solitudo

A very good reference for the Solitudo's biome is the Desert Zone from Nier: Automata, an almost spare desert where some ruins of modern buildings connect with rocks and cliffs. The overall mood is, of

course, the loneliness and very poor desert fauna (scorpions, snakes and vultures) and flora (cactuses and dry bushes) can be found.

Bestialitas

Bestialitas' biome is very peculiar since it does not have a proper arena, the boss fight is a great hunt to this big, wild creature enhanced with the two energies of the world in a dense jungle. The ambient, indeed, is a typical Indian Jungle with very few occurrences of abandoned modern city ruins like buildings, playgrounds or parking. Feral instincts and bestiality are uncontrollable thus players will have less familiarity with the surroundings, feeling smaller than ever, this will push the overall lack of control.

Marcor

The embodiment of diseases, pollution and rot has its homeplace in a great decaying factory set in a poisonous swamp. Miasmas are persistent in the biome and purple mists sometimes dampen the view of the players. The flora is mainly composed of decaying trees and poisonous plants or mushrooms and some strange crystalized plants are rarely found. The fauna, instead, is mainly made of insects.

Lex

A small island is located very near to the main game island, that is the Domain of Lex, the embodiment of Laws. This biome is a great technological city, populated by robots constantly maintaining and repairing everything. The scope of this city is to contain an enormous entropic force in its center. No fauna or flora are present. This land works as a metaphor of the concept of Law and boundaries, powerful forces trying to constantly contain chaos and anarchy.

Missing Data - Life/Death

The final boss fight of the game will take place inside the **Machine** location, a big abandoned laboratory of the past world left untouched by time. This lab is very silent, with some computer sounds rarely playing and businessmen or scientists common clothes can be found scattered around. The boss fight will take place in the center of the lab, near the Machine, where a great conference was undergoing at the time of the Ascension, so many chairs with clothes on them populate the zone and screens all around will play in loop some ads regarding the Ascension project.

Checkpoints

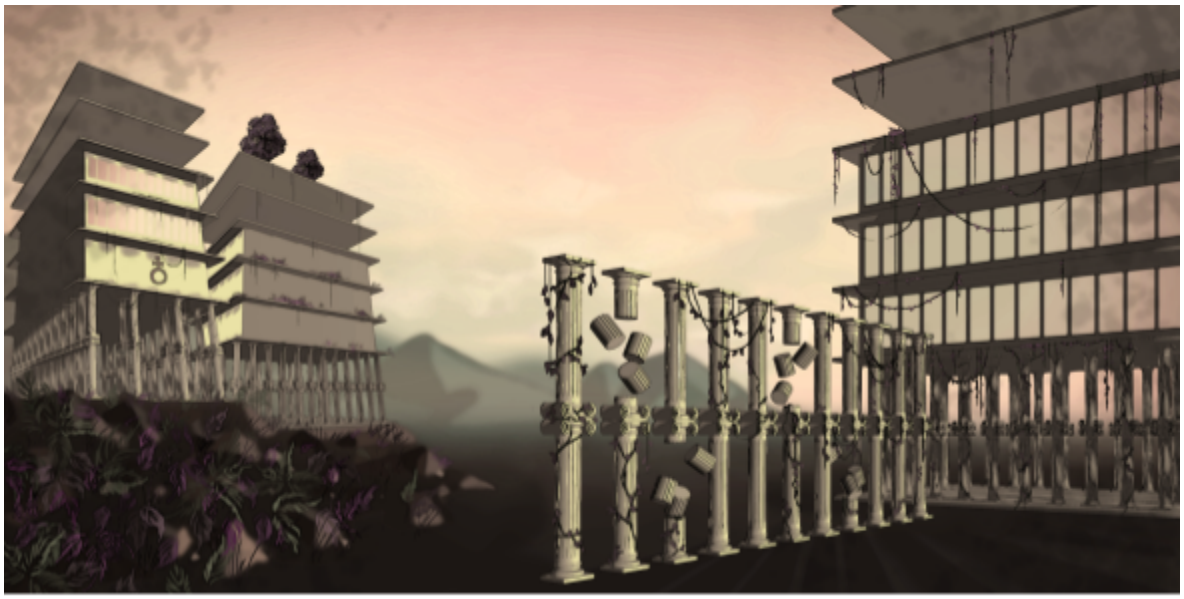
In the map will be located several checkpoints: the architecture of these checkpoints will be a mix of ancient Greek architecture and advanced technology.



Concept showing the view from a checkpoint area in-between Sors' Biome and Solitudo's desert.

Starting Point

The game will start in a checkpoint, close to other buildings of the architectural style we described in the overview.



Concept for the starting checkpoint.

Travel

The only way to move from one point to another in this world is by walking. The only exception will be the teleport, which can be triggered in the game menu, in the map, by choosing the desired checkpoint. **You can only teleport to checkpoints, in particular, already visited checkpoints**.

In As Two, the teleport can only be used only after the approval of the other player, and both of them will be teleported to the checkpoint chosen.

In Us One, the teleport is forbidden during boss fights.

When teleported while facing a boss the entire boss fight will be reset as it never happened, refilling the enemy's energy and setting its status to the initial one.
After teleport, the players will have their health restored.

What we won't have in the game world

We do not plan to include any weather conditions, day & night cycle or peculiar physical objects.

We also decided to not include any key items in the game map.
The game's physics will be the Newtonian physics in general, apart from what concerns PCs and NPCs special abilities, related to the two energies.

Music and Sound Effects

Since we don't plan any Voice Acting, we need Score and Sounds to describe the ambience mood and characters' emotions and to enhance the gameplay experience.
Lastly, we won't exclude that some bosses would highly base their mechanics on Sound.

Original Score

Each Score will be related to the **Biome** the players are in, **Bosses Scores** will be based on the Biome ones but much more powerful, solemn or excited.

The **Main Menu** soundtrack is very atmospheric, where electronic chimes and nature sounds like birds and wind through tree leaves are dominant.

Angor Fight has a simple piano soundtrack, in a slightly sad mood.

There is no soundtrack for Angor Biome, since the biome corresponds with the Boss Area only.

Sors Fight soundtrack has a very Japanese style, like the whole ambience and the boss himself, so Shamisen and Shakuhachi will be dominant but fused in an electronic mix, instilling excitement during the fight.

The travel through **Sors Biome** will be accompanied by a slow Koto to instil calmness.

The **fight with Deceptio** is accompanied by flamenco music, the overall mood will be anxiety and uneasiness.

Deceptio's Biome is a creepy wood, unsettling classical guitar music could be an interesting choice.

Sound Effects

Order

Order's sound effects will be very technology oriented, so typical laser/electrical/impulse projectile sounds are good enough for his **shots**, almost the same applies for his **Sword** slashes, a typical example is Star Wars laser sword.

Order's **charging** animation is represented by several "blocks" of energy ensembling together, for this reason, a "Data Stream" sound effect[9] is a good example.

Entropy

Entropy is a mass of undefined material, similar to a metallic fluid, the sounds she produces when **shooting and charging** will be very similar to Plasma Gun ones, especially those used in Disney's Lilo and Stitch film[10].

For the **sword slash**, liquid metal sounds can be mixed to steel sword slash sounds to produce an unique sound. A nice reference to start with are the T1000 sound effects, a character from Terminator Genisys movie[11].

Angor

Angor doesn't produce any sound by itself, apart from the spawn of projectiles and the laser beam.

Sors

Due to its wooden body and its marionette resemblance, Sors will produce "wooden clicking" sounds[12] when acting.

[9] https://www.youtube.com/watch?v=8WI02qIap3k
[10] https://www.youtube.com/watch?v=KYuq_XVe714
[11] https://www.youtube.com/watch?v=M9bPWcmFOc8
[12] https://www.youtube.com/watch?v=536A8yXLlE4

Sound effects for its rolling die are needed and since it is bigger than characters, the die will produce a dull rumble when touching the ground, like a big rock falling on the soil.

Deceptio

The aspect of deception will be almost silent, producing cloth moving sound effects upon movement.

All Bosses projectile shooting and laser beams will produce different typical laser sound effects[13].

Menus

We won't address any particular sound effect for menu navigation, they just need to be technological computer sounds producing low and satisfying tunes.

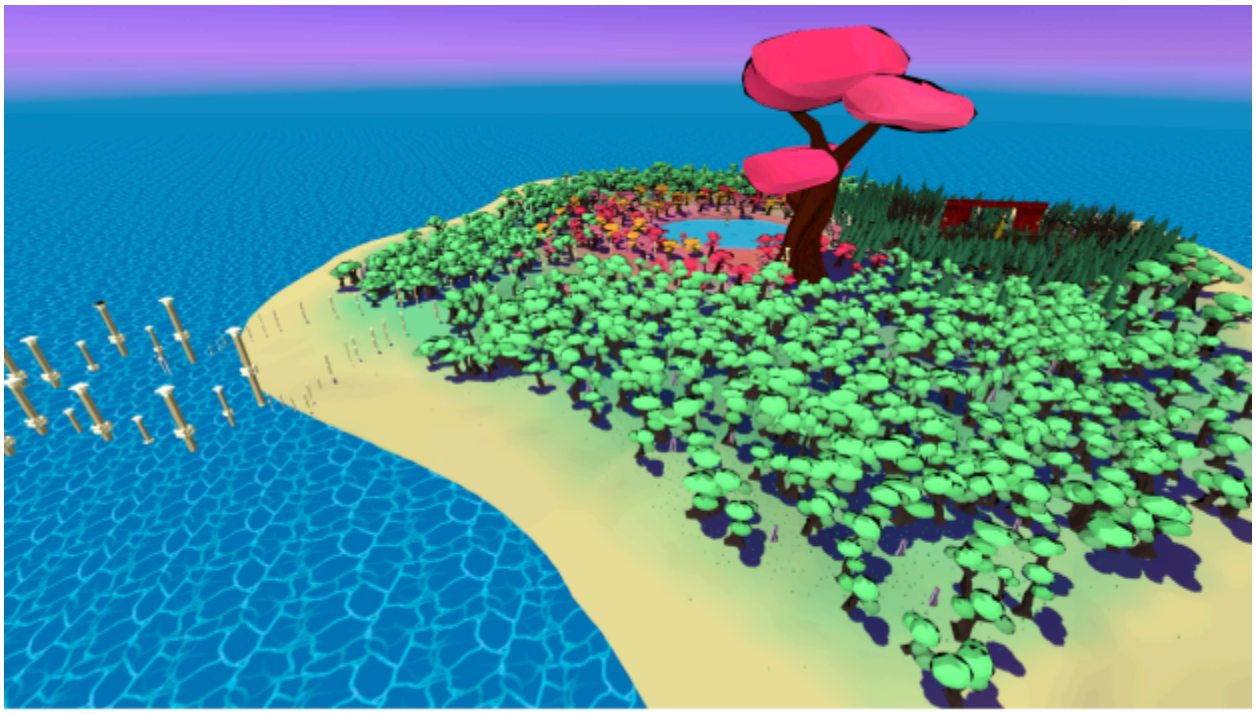
Biomes

The two bosses biome won't be populated by many sound effects since the only sources are the weather and some local fauna, in particular, a deserted atmosphere with some cicadas singing and the wind gusting through grasses and bushes characterize **Sors Biome** and typical night woods with owls and crickets singing for **Deceptio Biome**.

Prototype Content

The prototype of *Us One, As Two*, meant to showcase the core elements of the game, will include three bosses and their arenas, with some environmental props around. Since we expect players to try this prototype in a limited amount of time, the two main characters will have their starting charged skills with no customization possibilities, allowing to directly focus into the mechanics of the game.

[13] https://www.youtube.com/watch?v=C7rMBKhM-wY



The area of the prototype contains a simple version of the 3 bosses biomes

Media List

For File Naming Conventions, Data Management, Directory Structure please check the Appendix A of the technical design document.

Characters Models

We require .fbx files for all the 3D models.

We require the following 3D models:

- Entropy and Order models
- Sors model
    - Die Head model
    - Attack Dice
- Deceptio model
    - Mirrors
    - Portals
- Attacks' energies models
    - Sword
    - Projectile
    - Energy Ball

- Shield

Interface Assets

Players Health Bar.
Bosses Health Bar and Barrier Health Bar.

Time panel for time trial.

General UI

Font
Options icon
Buttons
Scrollbars
General UI Background

Opening Scene “Press any key to play”

- Background image

Game Mode Choice

- Background image
- Image for Us One
- image for As Two
- Options

Savings Handling

- Bosses icons

In-game Menu

- Modules slots
- **Modules icons**

Leaderboard section

- Background image
- Crowns icons

Environments

We require .fbx files for all the environment models.

Angor Biome/Checkpoints

- Moving greek columns
- Standard greek columns

Sors Biome

- Cherry trees
- Koi fish
- Glass Balls
- Arena Walls
- Arena Floor
- Cherry trees
- Cherry petals

Deceptio Biome

- Spooky/Glitched trees
- Portals
- Arena Walls
- Andalusian Arcades
- Theater (interior and exterior)
- Theater props: guitars, chairs, trunks

Animations

We require .fbx files for all the animations.

We require the following animations.

PCs

Levitation/Idle
Levitation/Generic Movement
Levitation/Fast Movement (for exploration)
Levitation/Dash
Damaged
Attacking/Energy Charging

Attacking/Sword,
Protection/Shield

Sors

Idle/Die rotating
Levitating around
Die throw
Defeated

Deceptio

Idle/Serpentine movements
Vanishing
Attack moves
Defeated

VFX

PCs

Order

1. Basic Projectile
2. Projectile charging
3. Energy ball
4. Basic sword slash
5. Wide Slash effect
6. Shield

Entropy

1. Basic Projectile
2. Projectile charging
3. Energy ball
4. Basic sword slash
5. Wide Slash effect
6. Shield

Extra

1. Explosion

2. Homerun
3. Stun
4. Sparkles

NPCs

Order Barrier.
Entropy Barrier.

Sors

1. Laser
2. White projectiles
3. Black projectiles

Deceptio

1. Deceit explosion
2. Fading
3. Portal Creation
4. Entering portal
5. Exiting portal

Environment

Cherry blossoms

Music and SFX

Original Scores

Main Menu
Sors Biome, Sors Fight
Deceptio Biome, Deceptio Fight

SFX

Ambience

Windy steppe with cicadas singing (Sors Biome)
Calm night wood with crickets and Owl hooting (Deceptio Biome)

Characters Sound Effects

Impulse Shot, Data Stream, Laser Sword for Order
Liquid Metal accumulating, Plasma Gun shot, Liquid Steel slash for Entropy
Marionette clicking, Die dull rumble for Sors
Cloth moving and Reflect for Deceptio
Laser shots and beams