



Project Overview

We are developing an Cyclical Resource Management Game, that explores elements of farming, crafting and combat.

Think of a mashup between:

- Stardew Valley: Farming System
- Plants vs Zombies: Enemy Wave Attack System
- Minecraft: Enemy Mob System

This will be communicated through a 2.5D perspective




Game World Context

So what is this game really about?

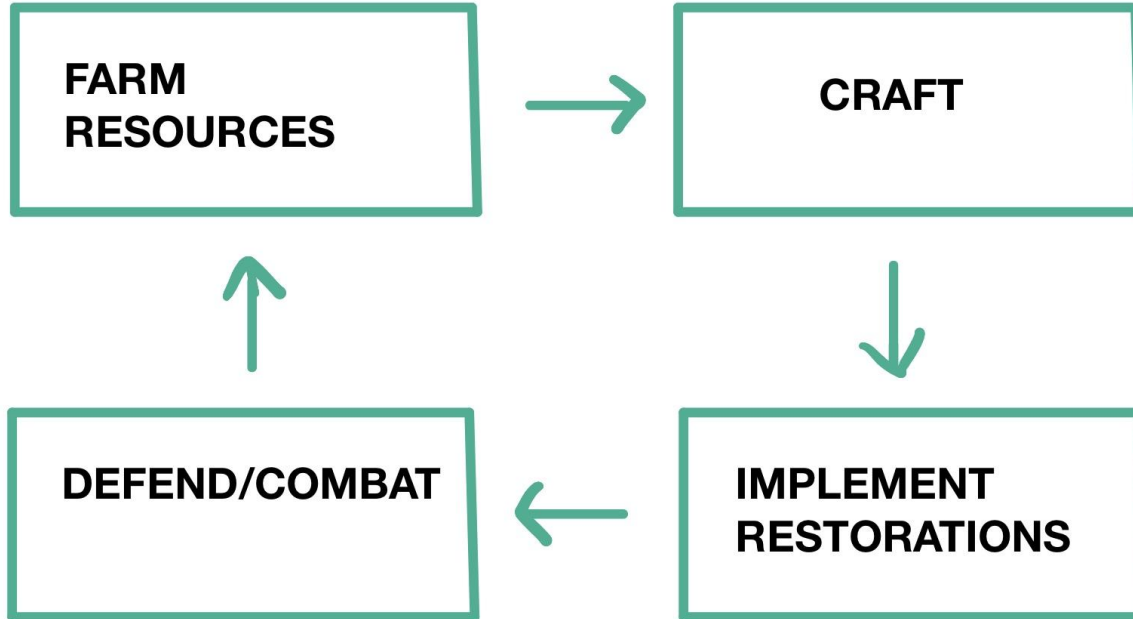
The player is placed in a dying world and must restore the health of the world.

The player must explore different areas to farm different biotechnology components to craft biotech machines that restore the world's health.

The world is inhabited by dangerous creatures that thrive in this dying climate and will attempt to damage any restoration that the player implements.

- 
- The world runs on a daily cycle and this cycle is divided into 4 phases.
 - Resources have different growth rates and benefits during different phases
 - Waves of creatures attack base hub during the night phase
 - Weapons and defenses can be crafted to defend against attacks

4. Gameplay Loop



5. Progression Loop



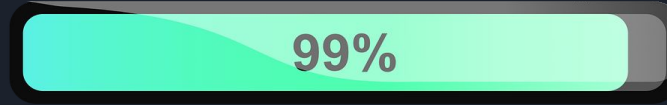
```
graph LR; A[RESTORE WORLD HEALTH] <--> B[UPGRADE WEAPONS AND DEFENCES];
```

**RESTORE WORLD
HEALTH**

**UPGRADE WEAPONS
AND DEFENCES**



Progression



- Progress Bar indicates level of world Restoration
- Placement of restoration machines increases level
- Damage to machines and hub decreases level



Progression

- Progression Follows a Day Cycle:
- Different Phases Affect Growth of resources
- Progression increases through time



End State

- Win Condition: The player has restored the world's health to 100%



Player Interactions and Game Systems

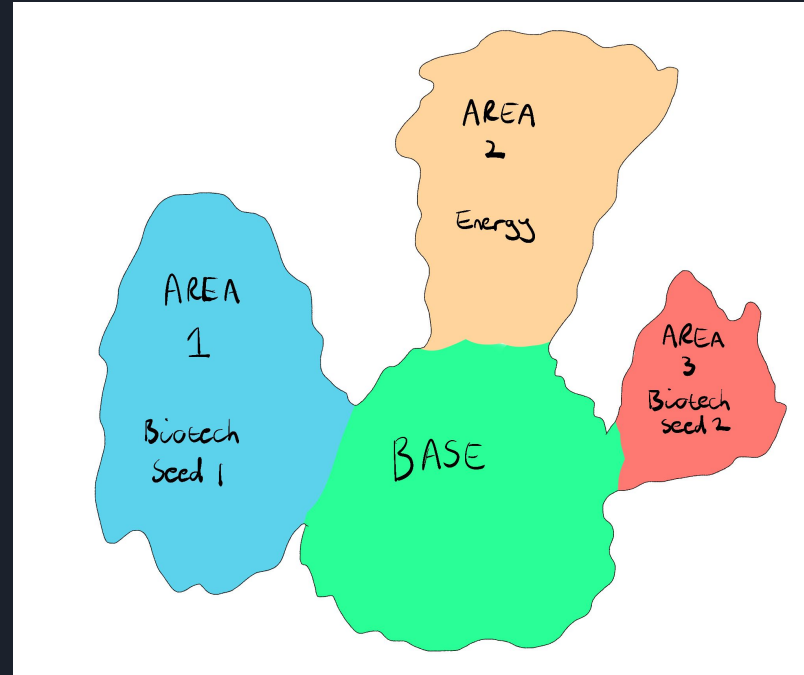
- Farming Environments
- Crafting
 - Weapons/Defenses
 - Restoration Machines
- Machine Implementation
- Creatures and Combat
- Daily Cycle



Farming System

- 3 Environments, 1 per Resource
- Resources:
 - Biotech Seeds 1, 2
 - Energy Crystals
- Planting:
 - “Wild” Resources must be collected
 - “Wild” Resources must be planted to be farmed
- Growth and Upkeep
 - Planted Resources grow with time and Day Phase State
- Collection:
 - Grown Resources will be harvested for use

Environment Diagram





Crafting System

- Collected Resources can be used in different combinations to craft Machines and Weapons
- Similar to a Minecraft Crafting Table system



Weapons

- 2 Weapons will be available for crafting:
 - Long Range Laser
 - Short Melee Electric Staff
- Both Weapons can be upgraded through the Crafting System



11. Restoration System

- Crafted Machines must be placed in required areas to restore World Health
 - E.g Chlorophyll Machine must be placed at dead plants to restore them

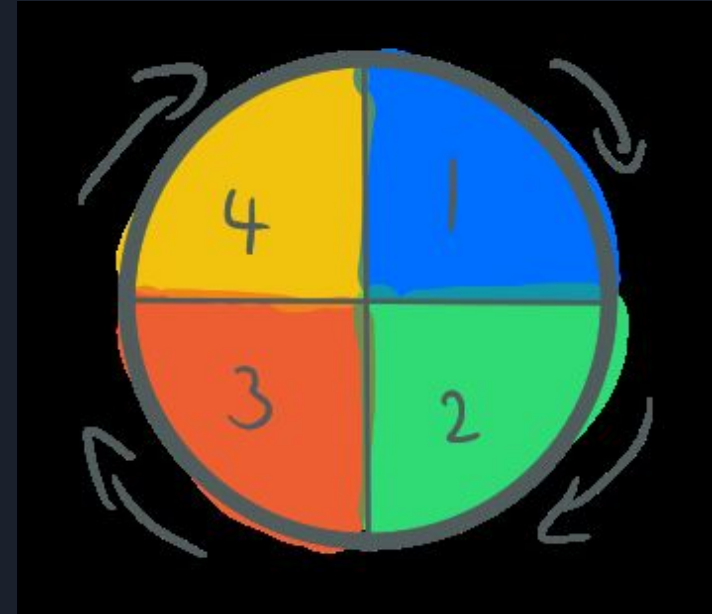


Combat System

- Creatures attack during the night phase
- Crafted Defenses and Weapons must be used to defend against attacks
- Crafted Defenses:
 - Force Field, used to shield environment from creatures(Can be damaged and broken)

Daily Cycle

- Resource Growth rates vary for each phase
- Certain areas require mending/upkeep between phases
 - E.g Solar Panel Positioning for Energy Crystals
- Phases 1-3:
 - Day and Evening
 - Farm, Craft, Restore
- Phase 4: Night
 - Creatures Attack
 - Hub Damage results in Restoration decrease
 - Creatures will die if they survive to Phase 1





Story Boarded Gameplay



References and Inspiration



Plants vs Zombies - defense mechanics and strategies



Stardew Valley - The mechanic of farming.

Call of Duty Zombies - Has similar mechanics to Plants vs Zombies, except here, enemies can tear down defense.



Minecraft Crafting Table - the mechanic of swarm attacking during the night and dying in the day

Bastion - the action of always returning to home base.





Q&A