Base Idea

- Main game idea unchanged:
- Setting: Post Apocalyptic World
- Build on Surface and Bunker, defend the Bunker entrance with Robots and Towers
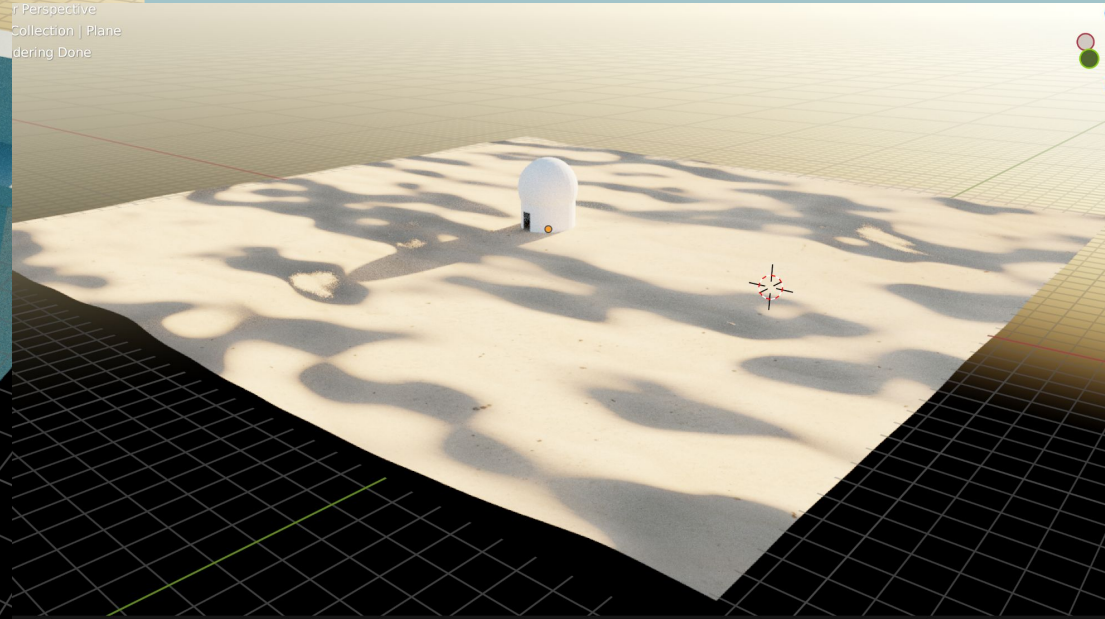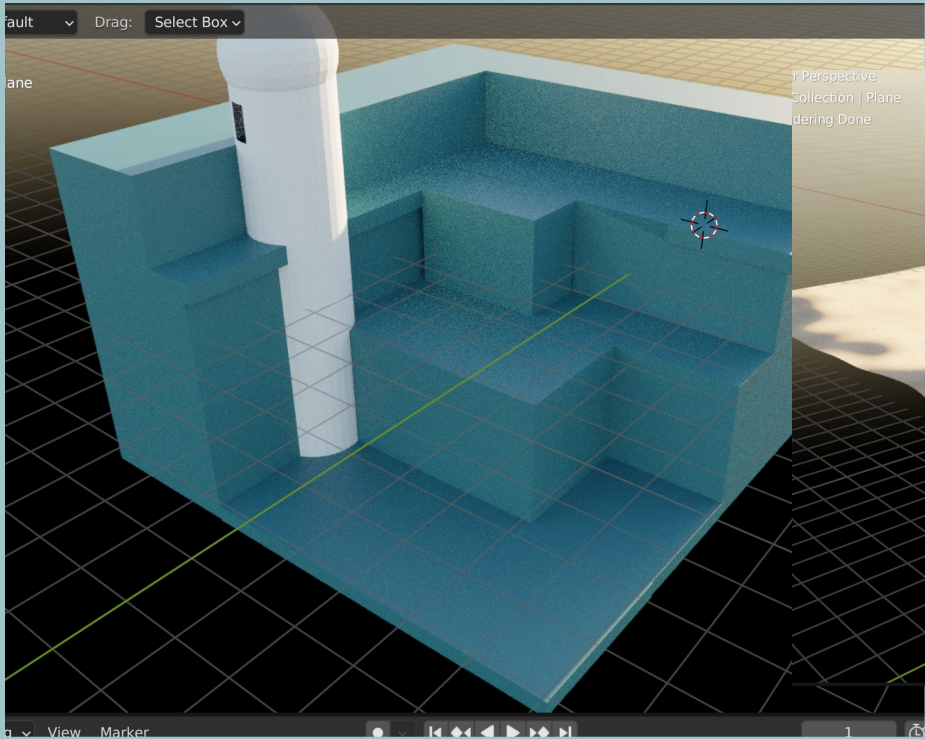- 2.5D RTS with heavy focus on Basebulding and Tower defense

Gameplay

- build your bunker and surface buildings
- assign people to it, or build robots to operate on surface
- surface absolute essential to survive but attack regularly by enemies

=> employ Tower Defense and Defend Bots

First Drafts - Switch between views

Tower defence details

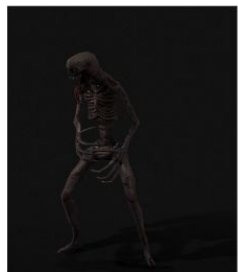**Monster**

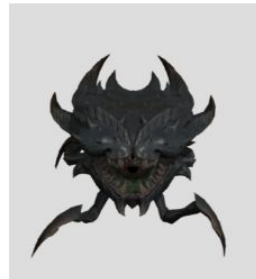-Big Crab or Spider (TBD):

HP: ⭐⭐⭐⭐⭐   speed: ⭐   dmg: ⭐⭐⭐

-Eye Monster

HP: ⭐   speed: ⭐⭐⭐⭐⭐ dmg: ⭐

-Alien

HP: ⭐⭐   speed: ⭐⭐⭐⭐ dmg: ⭐⭐⭐

- Barbarian

HP: ⭐⭐⭐   speed: ⭐⭐⭐   dmg: ⭐⭐⭐
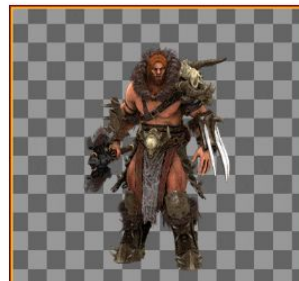
Tower defence details

Robots

-Harvest robots

   -Harvest crops

   -Walk around and look for seeds

   -Can't fight

   -Low HP
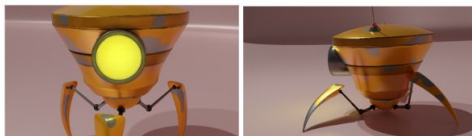
-Fighting robots

   -Big robots: High HP, low speed   -Small robots: Low HP, high speed

-Medium robots: medium HP, medium speed
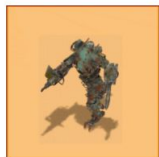
weapon sys:

-Shotgun(area damage)

   dmg: ⭐⭐⭐   range: ⭐⭐⭐⭐

   rate of fire: ⭐⭐⭐   Cost: ⭐⭐⭐

-Rifle

   dmg: ⭐⭐⭐   range: ⭐

   rate of fire: ⭐   Cost: ⭐⭐

-Flamethrower(area damage)

   dmg: ⭐⭐   range: ⭐

   rate of fire: no need   Cost: ⭐⭐⭐

-Pistol

   dmg: ⭐   range: ⭐⭐

   rate of fire: ⭐⭐   Cost: ⭐

Tower defence details

Tower

    —Machine gun

      dmg: ⭐⭐   range: ⭐⭐⭐   rate   of   fire: ⭐⭐⭐⭐

      Cost: ⭐⭐⭐

    —Laser

      dmg: ⭐⭐⭐⭐   range: ⭐⭐⭐⭐   rate   of fire:no need

      Cost: ⭐⭐⭐

    —Cannon(area damage)

      dmg: ⭐⭐⭐⭐⭐   range: ⭐⭐   rate   of fire: ⭐

      Cost: ⭐⭐⭐⭐

-Crystal (area damage,slow down monsters)

      dmg: ⭐   range: ⭐   rate of fire:no need

      Cost: ⭐⭐

Resource design

Machine Manufacture

Worker

Health
Focus

Electricity
scrap

→ **Parts Factory** → Produce →

Parts

Worker

Health
Focus

Electricity
scrap

→ **Gun Factory** → Produce →

Weapons

Assembly Plant

Worker

Health
Focus

| Electricity |

With Weapons →

Armed Robot

Without Weapons →

Harvest Robot
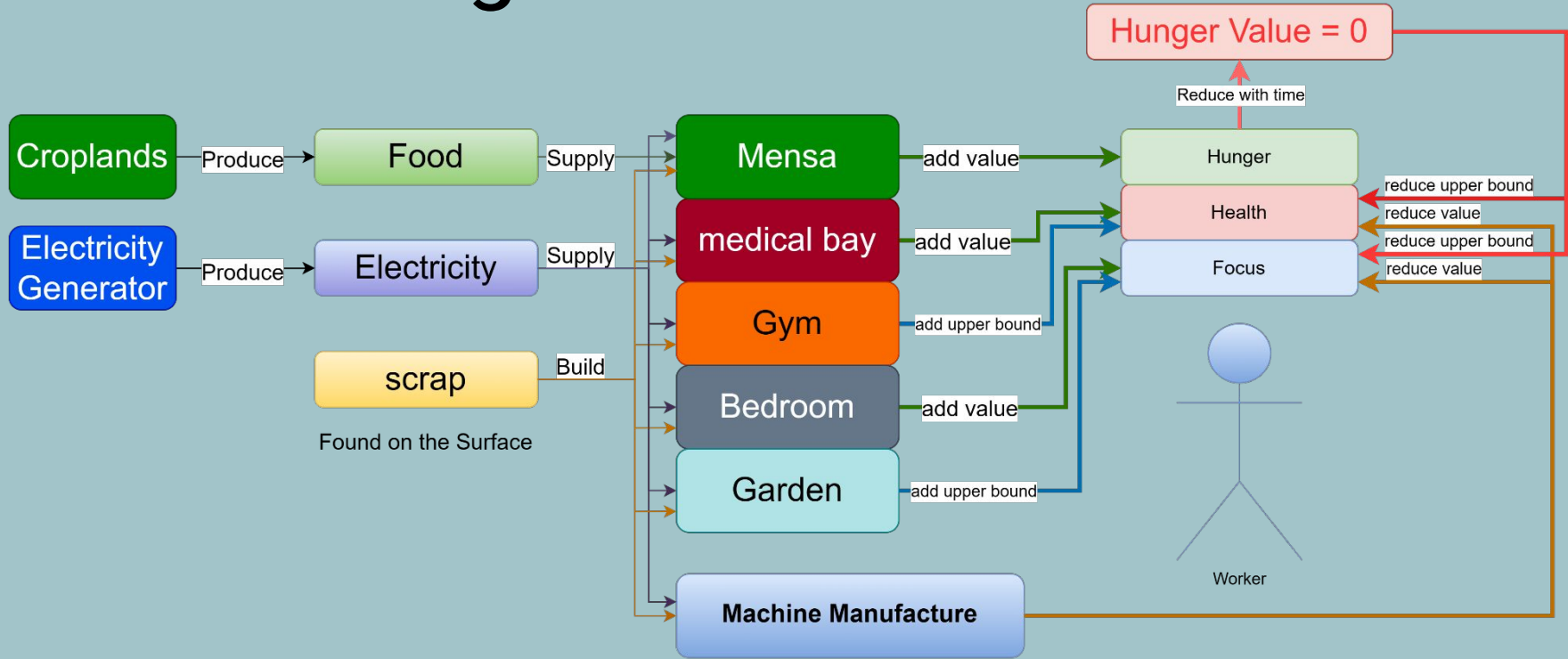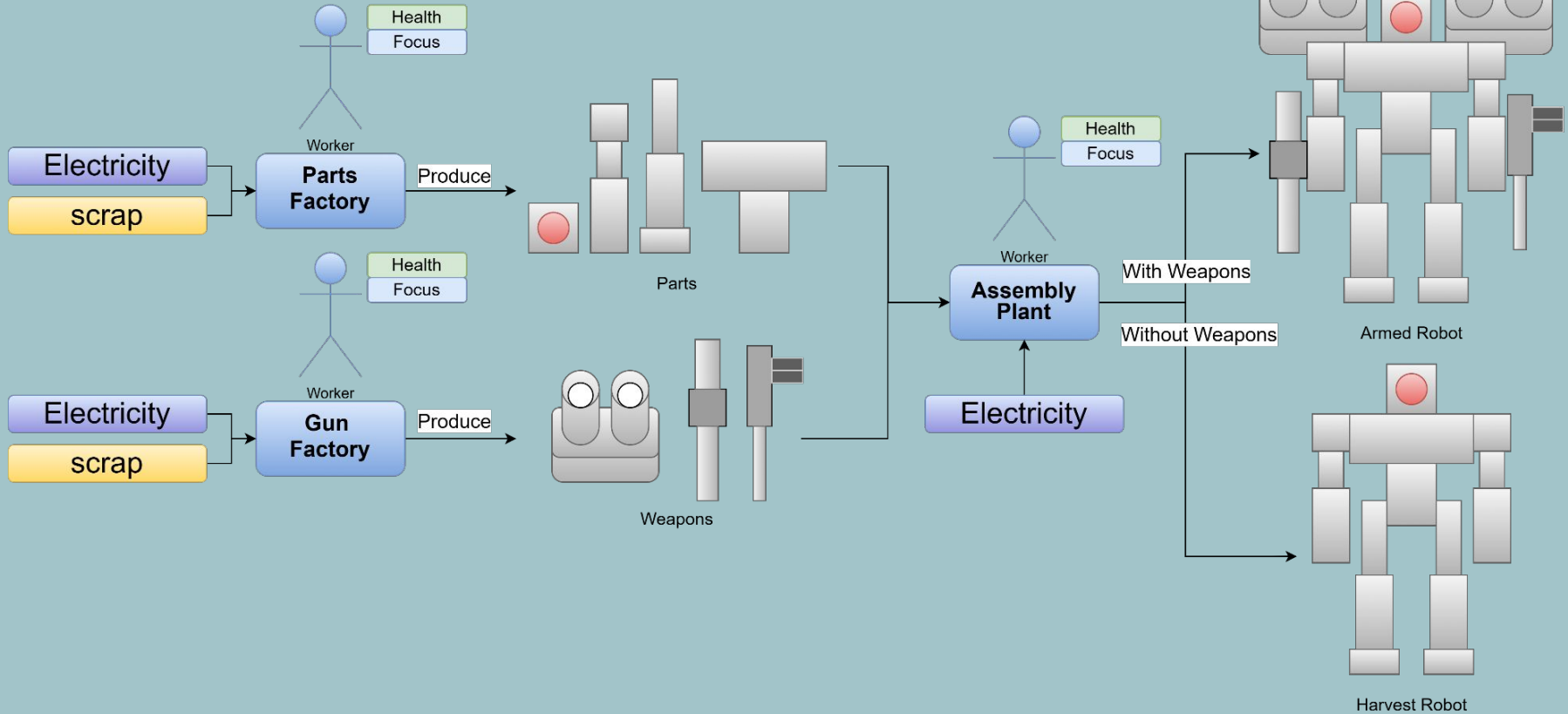
"Big Idea", Bullseye
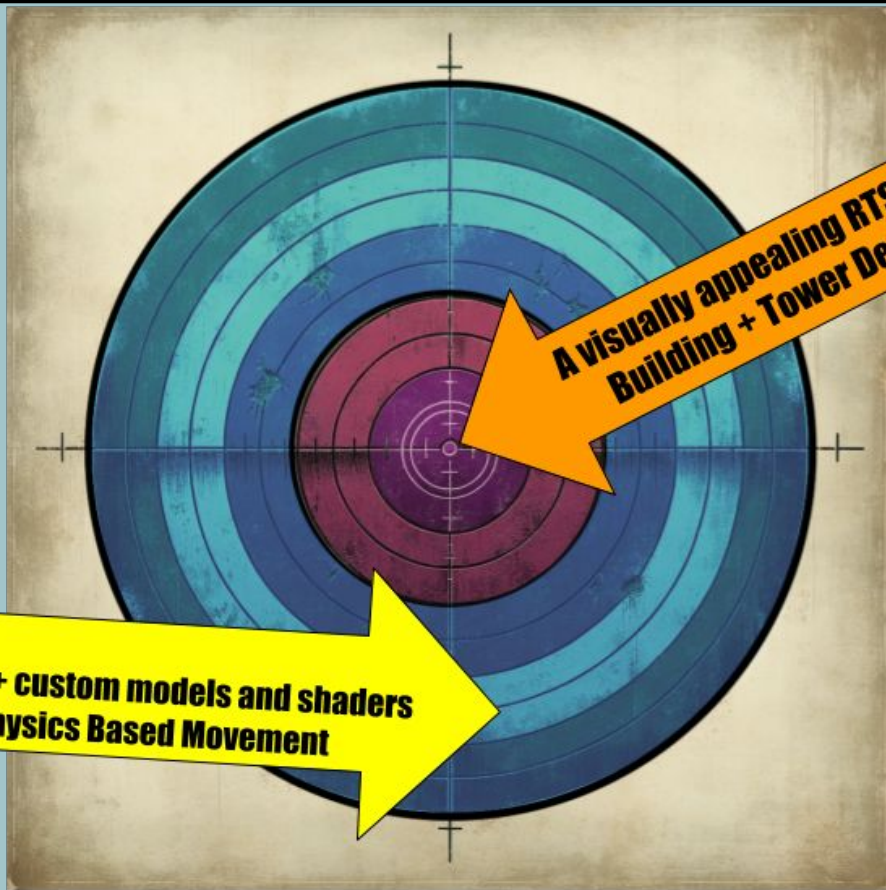
A visually appealing RTS + City Building + Tower Defense

Using HDRP + custom models and shaders + ML Physics Based Movement

Feature list main goals

1. Functional Minimum
   - make the base game mechanics work like placing buildings etc
2. Low Target
   - add nice Graphics and visual style
   - polished base game

3. Desirable Target
   - additional custom animations and models
4. High Target
   - polishing
5. Extras
   - ChatGPT, autonomous enemies

Extended Feature List

Task	Estimated Time in hours	Time took	importance	Developer	comment
basic Map and buildings model	20		1	Matija	
Camera Control for both Surface, Bunker	20		1	Matija	Including Switch button between bunker surface, using Unity's Input system
construction system	20		1	Hongbo	let the player place wanted buildings to certain location
Menu for start save	10		1	Haorui	
underground basement operation logic	60		1	Hongbo	What buildings produce what resource / need what resource to operate / how many people can be plugged in the buildings etc
workers selection and deployment	20		1	Hongbo	check workers status and send them to the place to work
Adding Details to map	30		2	Matija	
Models for surface buildings	40		2	Matija	
Resource tab	10		2	Haorui	
advanced Visuals with custom shaders	40		2	Matija	
Win Lose condition	10		2	Haorui	
Animations for surface buildings	20		3	Haorui	
Animations for underground buildings(prefab)	40		3	Matija	Making cool animations with Inverse Kinematics
building construction menu	30		3	Hongbo	make it easier for player to interact
Elevator Logic/System	30		3	Hongbo	Elevator only connect layers of underground layers
MLagents based robo-spider walking	30		3	Matija	
Models for details like junk	20		3	Matija	
Models for underground buildings	30		3	Matija	
Music	5		3	Haorui	
People's behaviour logic when resting	20		3	Hongbo	People go to kitchen & garden & hospital by themselves when released from jobs
Saving the current game	10		3	Haorui	saving whole state of every object, saving it to database or file, load it
Sound effects	20		3	Matija	Sounds of machienes when zooming in, Light having buzzing etc.
Tower defense attack math	30		3	Haorui	
worker generation system/birth logic	40		3	Hongbo	child will inherit parents' outlook / maybe some sort of clone device which only needs to put a couple into the container then it can generate a clone kid in a second
Animations for Cursor	5		4	Matija	
Animations for Buildings, Cursor and people	60		4	Matija	work, walk, sit, lie down, get hurt, injured walk, chat	Take from Aasetstore
Complicated enemy behaviour	60		4	Matija	
People animation when resting(chat, play instrument)	10		4	Haorui	
Dynamic 3D sound			5		
GPT driven underground Management System	100		5	Hongbo	Only if have time
Having Story Modus with Missions			5		
More enemies			5		
Multiplayer in some way			5		

Timeline

Deliverables:	- Timelines - Presentation - Report: Game idea proposal - Bullseye - Surface Combat Design - Underground Facilities Design	Report: Prototype Slides: Prototype			Report: Interim results Slides: Interim results				Report: Alpha documentation Slides: Alpha release		Report: Playtesting results Slides: Playtesting results		Report: Final documentation Slides: Final release Gameplay video Compiled final game version
	01.11.2023 – 08.11.2023	15.11.2023	22.11.2023	29.11.2023	06.12.2023	13.12.2023	20.12.2023	27.12.2023	03.01.2024	10.1.2024	17.01.2024	24.1.2024	31.01.2024	7.2.2024
Deadline	1. Milestone: Game idea	2. Milestone: Prototype			3. Milestone: Interim demo				4. Milestone: Alpha release		5. Milestone: Playtesting		6. Milestone: Final release
	Week1	Week2	Week3	Week4	Week5	Week6	Week7	Week8	Week9	Week10	Week11	Week12	Week13	Week14
All	Presentation, timeline etc. (15)	Paperprototype (30) Presentation, timeline etc. (15)											
Matija		Camera Control for both Surface, Bunker (20) basic Map and buildings modelbasic Map and buildings model (20)	advanced visuals with custom shaders and HDRP (40) Adding Details to map (30) Models for surface buildings (40)			Animations for underground buildings (40) MLagents based robo-spider walking (40)			Models for details like junk (20) Models for underground buildings (30) Sound effects (20)		Animations for Buildings, Cursor and people (60) Complicated enemy behaviour (60)		
Hongbo		construction system(20) Elevator based navigation system(30) workers selection and deployment(20)	building construction menu(30) underground basement operation logic(60)			worker generation system/birth logic(40) People's behaviour logic when resting(40)	GPT driven underground Management System(100)						
Haorui		Menu for start save(10) Music(5)		Resource tab(10)		Animations for surface building(20) People animation when resting(20)			Tower defense attack math(30)		Saving the current game(10)		Win lose condition(10)

Assessment

- promising mix of genres
- optimal game a lot of work but countered by our layered approach
- experimental character of project; all depends now on execution and how much time parts will take