

Authors: Aidan Whitlock, Leon Misoulis

Key: Design Guideline | **Emphasis**

1 Design Overview

1.1 Elevator Pitch

To Pierce Eternity is a 1st-Person sci-fi/horror puzzle adventure set on an abandoned space station with a heavy emphasis on atmosphere and a psychological twist. Your HUD and the A.I. companion it hosts are your only guide, but a strange corrupting force makes them difficult to trust. Overcome the rogue HUD to solve environmental puzzles, discover clues about the corruption, and evade a dangerous stalking Entity.

1.2 Player Experience

- Building tension fear, & dread – the ambience, the environment, and your relationships become more tense and hostile over time
- Unravelling mystery – clever exploration & system experimentation should be rewarded with secrets & hints
- Eureka! Moments – puzzle solutions and narrative revelations should be satisfying and built up with multiple layers

1.3 Design Pillars

1.3.1 Deception vs Reality

The HUD lies; the environment contains the truth. - “The UI wants to kill you.”

The world is broken; something is deeply wrong here.

If the player ever asks themselves “*why am I having to fix x*” the answer should:

- 1) be present in the environment and
- 2) point to the idea that the game is not how it should be.

1.3.2 Environmental Puzzles

The play space must be explored to engage with the mechanics and find the solution.

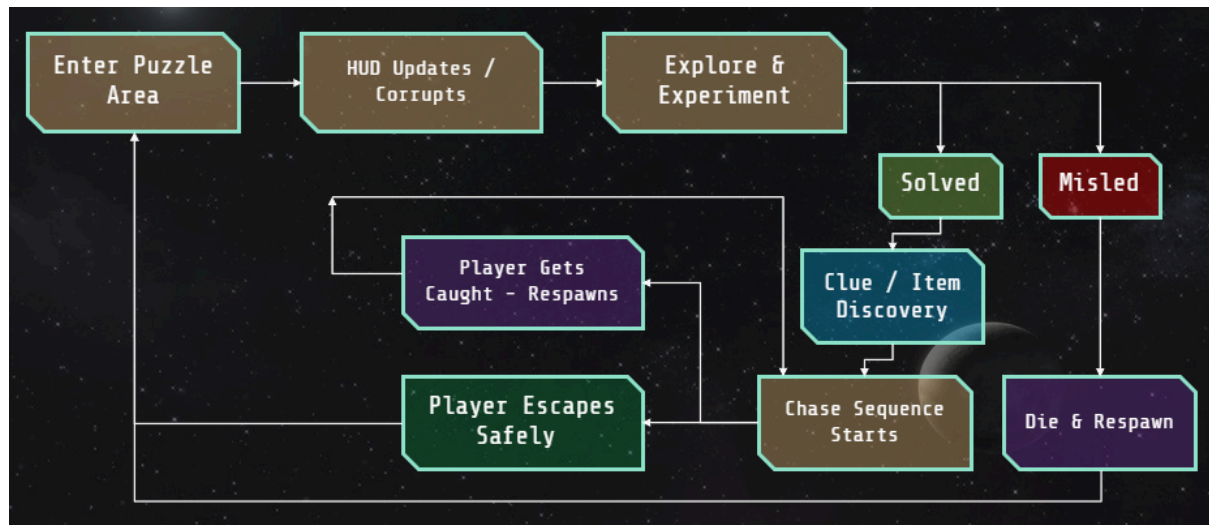
Gameplay revolves around these puzzles, so **all other core features should serve to heighten their experience.**

1.3.3 Immersion

Keep interaction immersive; the game wants to trap you.

Keep interaction simple and streamlined – the mental load should be on thinking and withstanding the horror, not figuring out how to play.

1.4 Core Loop



1.4.1 Save State

To fulfil the proposed gameplay loop, saving and loading is necessary for respawns. The following information should be stored:

- ~~Which main game puzzles were solved~~
 - ~~Primary solution~~
 - ~~secondary solution~~
- ~~if specific terminal codes have been entered~~
 - ~~Main puzzle terminal codes~~
- ID & location of last checkpoint reached

On respawn, health & battery can all be restored to full. There should be a delegate which puzzle manager actors can subscribe to Reset() their logic as well.

2. Core Mechanics & Features

2.1 Core Controls and Player Character

2.1.1 Movement

W - Forwards | **A** - Left | **S** - Back | **D** - Right

When pressing S, the character should have reduced movement – simulating walking backwards

Shift (Hold Down) | Sprint

When holding shift + s, walking backwards speed increases slightly

2.1.2 HP & Death

MaxHP | 100%

Healthbar Interactions:

- HP Ticking down (DOT effect)
- HP Ticking up (regeneration effect)
- HP instantly restoring a specific amount (20-30?)

Dying Sequence

- I. Healthbar reaches 0
- II. Player character collapses on the floor ~~& camera follows that~~

2.1.3 Object Interaction

Left Click | Interact with Item

- I. Interactable object has a radius around it
- II. When player enters radius, the “Left Click” button visual pops up above the object
- III. Player presses LMB
- IV. Interaction happens (based on object)

2.1.4 Ability Selector

Q (leftwards) E (rightwards) | Rotate through abilities

- Switching triggers a subtle sound
- All abilities should be present on the selector from the start, but only the Headlamp will be unlocked initially. Locked abilities should have a distinct appearance from unlocked ones, with a design consistent to other instances of “corruption”.
 - Cody should mention that as the ship is repaired, he will gain the ability to fix corrupted abilities.

2.2 HUD Design & Components

2.2.1 “Corruption”

Corruption in the context of the HUD, changes or briefly alters the visuals of certain HUD components, primarily the Minimap and the Objectives. These visual changes can be supported by audio elements to enhance the feeling of change. These changes should be brief, containing effects like glitching or slight colour variations for < .5s, before “stabilizing” into a normal version.

2.2.1.1 Mini-Map Corruption

Should trigger when Cody gives the player a location inside a puzzle that leads to an irrelevant or threatening location. When that location is given, the map should glitch very briefly, and the dots should appear with that same effect and have a colour change for the duration of the glitch. The “location” in that sense would be a component in the puzzle.

2.2.1.2 Objective Corruption

For the objectives, the corruption effects would trigger when Cody gives the player wrong instructions. When the information provided is false (vocally), the text would appear with this glitchy effect and colour distortion, before stabilizing into the normal styled text.

In general, the corruption mechanic should be consistently represented visually with the glitch and colour effects, to establish its design language to the player.

2.2.2 HUD Disabling/Rebooting

Disabling triggers a glitching / phasing effect, before turning off the HUD for an amount of time.

The glitching effect should affect the entirety of the HUD UI and clearly show that the HUD is being turned off or “shutting down”. The end result of the ceremony should have all HUD UI elements removed from the screen.

While the HUD is off, a reboot timer widget should indicate the time remaining before it comes back on.

After the amount of time has passed, the HUD will turn on, with a short effect that shows a startup and enabling elements one at a time, signifying the HUD turning on again.

These effects (on / off ceremony, reboot timer) should be supported by sound effects that get triggered and play throughout the ceremony.

2.2.3 Mini-Map

Map Details:

- Square Shaped
- Shows outline of the current room the player is in & the objects within it
- Shows target locations for the player to go to
 - These locations can be corrupted by Cody, in which case, the dots have a subtle glitching effect when showing up
 - These dots appear when Cody gives the player an instruction to go there

- These locations can be the location of puzzle elements, for example the location of a broken control terminal or PCU
- Dot Colour Code:
 - Green Dot – location to go to, pure guidance
 - Orange Dot – location to interact with, puzzle set up
 - Red Dot – Threat or enemy

2.2.4 Objectives

Objective Panel Layout:

2.2.4.1 Main Objective

- Should be a short phrase, describing the final goal of the puzzle, such as “Locate Generator Room”
- Must be followed and completed to progress through the game. If ignored, the player cannot move into the next room.
- Has 2 states that get triggered depending on which areas of the station the player is.
 - State 1: Objective is mentioned by Cody, but player is not in the puzzle area yet, so the objective is asking the player to locate the area
 - State 2: Player reaches the area, and Cody gives an outline of the goal, in which point the objective text changes to the core quest goal, for example “Restore Power to Generator”

2.2.4.2 Steps

The steps are short phrases that translate Cody’s vocal instructions into on-screen text under the main objective. They are specifically telling the player what to do, however the instruction can be false. The step number refers to the order in which Cody introduces it **NOT** the order the player has to take to solve the puzzle.

- The Steps **can** be corrupted and display **false information**
- The player can choose to either follow the order Cody is introducing the steps in or ignore it. The puzzle doesn’t need to be solved in this order unless explicitly mentioned

Example flow of the First Puzzle Objective cycle:

Cody says “We need to restore power to the station; the generator room should be nearby”

Main objective shows up: “Locate Generator Room” – no steps show up yet-

When player reaches generator room, Cody says “The station cannot function properly without an operable generator. To recharge your suit and enable its other features we need to restore its power”

Main objective text updates to “Restore Power to Generator”.

Cody follows up with a line “To restore power you need to find the PCUs and input the correct amount of wattage in them”

Main objective step 1 shows up under the main objective

Restore Power to Generator

☐ **Activate all three PCUs**

Cody follows up with “*Try setting Power Control Unit one's wattage to 120*”

Main objective step 2 shows up under the main objective and under the 1st step

Restore Power to Generator

☐ **Activate all three PCUs.**

☐ **Set PCU1 to 120 Volts.**

Differentiating between corrupted and truthful info:

When a **corrupted (false)** piece of information pops up in the objectives, there is a subtle glitching effect and orange colour before it stabilizes.

When a **true piece** of information pops up, the glitch effect is very soft and there is no colour affecting it at all.

2.3 HUD Abilities

2.3.1 Headlamp

Right Click | Toggle ON/OFF | Light Type: Spotlight pointing forwards

Light Energy Mechanic:

When the light is on, a small battery overlay shows in the HUD (could be a flashlight icon with a battery icon with 3 bars in it). While it's on, the battery starts draining, and the lights intensity goes down along with it.

Headlamp can be recharged when the player “Shocks” themselves using the Short Circuit Stations

Placeholder values for battery life:

1st Bar durability – 2 Minutes

2nd Bar Durability – 1.5 Minutes

3rd Bar Durability – 1 Minute

When 3rd bar durability duration expires, the light turns off

2.3.2 Scanner

Right Click (Hold) for 2 seconds | Activate Scan

A pulse effect, visually similar to the scan in lethal company, that works in an AOE around the player.

The scanner ability is a single use ability per puzzle section. It should temporarily **(10 Seconds)** highlight all interactable objects & objects containing hints for the puzzle's solution in an area around the player. The highlight colour should indicate the category of object. The functionality of the scanner should be restored when the player reaches the next safe zone.

Highlight Key

- **Orange** - Interactable Objects
- **Green** - Hint Objects

Corrupted hint objects may have a separate highlight colour or some additional ceremony (glitching) to indicate to the player that something has changed and is not the way it supposed to be.

2.3.3 Purifier aka “One Up”

Right Click (Hold) for 3 Seconds | Activate

The Icon for this ability should look like a generic heal or +life style icon.

This ability insta-kills the player. Mechanically, it's a soft lock protection mechanic in case we really frick up. From a design perspective, it's a way to introduce HUD lying being linked to death from the very start. The long activation time is a way to avoid frustration from mis-clicking.

3. Puzzle Sections

The puzzle sections in *To Pierce Eternity* make up the majority of the game's core loop. There should be at least one checkpoint at the start of each puzzle.

They are comprised of the following core elements:

3.1 Environmental Puzzles

The puzzles should be comprised of various Interactable Objects and environmental elements (props, obstacles, etc) with clear tactile & audio responses upon interaction. The immediate effect of interacting with puzzle elements and their

inter-connected nature should be conveyed prominently to encourage experimentation & “puzzling” to find a solution.

3.1.1 Secondary Solution

For added complexity & depth, each puzzle should have a bonus solution which reveals a secret area to the player. Within these secret areas, the HUD is disabled indefinitely.

3.2 HUD Deception

The information displayed on the **HUD** should be falsified or obscured in some way that provides a challenge for the player. This instance of “corruption” should be directly related to the solution to the puzzle, rather than just arbitrarily chosen. Ideally, they should also lead the player into whatever **threats** the section contains.

- The corruption beginning should be indicated clearly by a ceremony on the **HUD**

3.3 Threats

Things that can damage and kill the player if steps are not taken to avoid them. Could be environmental obstacles or events triggered by certain actions taken by the player.

3.4 Puzzle Hints

3.4.1 Hud Objectives

- Simple, short phrases such as “Find the blue lever” or “Press the red button”
 - See [HUD Objectives](#)
- These may or may not provide false goals or information
- In the case that the given info is false or misleading, following it into a fail state may prompt a follow-up lie or obstructing objective
 - In this way, an abundance of incorrect instructions will allow the deduction of the correct sequence

3.4.2 Physical Artefacts

- Manuals / papers with operational instructions for mechanical puzzle components
- Room specific props (i.e. chalkboard for lab) with notations or clues
- Lights, dials, & bars that give positive reinforcement when progress is made towards the solution

3.5 Short Circuit / Recharge Station(s)

Interactable Object which allows the player to shock themselves and disable the HUD for a variable amount of time. The placement of these stations should be highly intentional to allow the player to experiment with them to find hints or solve the puzzle.

Overload Switch

If the player wants to use the station to just recharge and not disable the HUD, a switch can be flipped on the side of the station to toggle to low power mode. When the SCS is introduced, the switch should be stuck on high to force the tutorialization of HUD disabling. When the HUD comes back on Cody can then react and explain the switch toggle and tell the player not to turn the HUD off that way again.

Interaction

Left Click - Switch: toggles between 2 power options

Left Click – Short Circuit Station: Triggers the shocking mechanic

200w = HUD disabled + Nearby liquid ignition + Headlamp charged (full)

100w = Headlamp Charged (full)

3.6 Secondary Solution & Secret Area

The secondary solution should require the player to interact with the puzzle's main mechanics in a subversive way which diverts from the stated goals of the section and is non-initially intuitive. This will add to the solution's "secrecy" & the satisfaction of discovering it and keep it obviously distinct from the main solution.

3.6.1 Hints to Unlock

Each section has certain objects that hint towards the existence of a "secondary solution" to the puzzle and give clues for solving it. Should be placed at key points within the level which are required for visitation to solve the main puzzle. As an added layer of obfuscation, these objects may be hidden or indecipherable unless the HUD is disabled, as a form of the corruption manifest.

3.6.2 Secret Area

Contains clues for the final terminal puzzle and the mystery of the game's true narrative.

3.7 Control Terminal

The end goal of each puzzle should be interfacing with a **Control Terminal**. The activation of these terminals is the method by which **the Custodian** gains power to

eventually take over the whole game. Interfacing with the control terminal should be a checkpoint / autosave trigger.

3.7.1 Cypher Input Mechanic

Code “cipher” should work universally on any terminal. It should meet the player with a prompt to input a Key, and then Message. The input/output of each prompt should stay visible throughout the sequence.

Example: Key: **prompt** | *player input*

-- *Cipher*

-- **Key:** *Entity*

-- **Message:** *Test*

-- **przl**

-- |*Enter Code*

3.8 The Final Puzzle

See [The Final Puzzle Brainstorm.docx](#)

Summary: Lore contained in the

4. The Entity / Chase Sequence

4.1 The Entity

Presented as a traditional Horror “monster,” foreshadowed & glimpsed throughout the game ~~but not seen until the final act~~. Its visual presentation primarily evokes an out of place constructed monstrosity and secondarily alludes to puppetry, as its threat should be clear but its nature as an unwilling & unnatural enemy is important as well.

4.2 Chase Introduction

The Entity chases the player through the Underbelly of the station. The player is teleported to the Underbelly after the last puzzle. After walking for a few seconds, the player can go left or right, with the Custodian urging them to go left. After a few steps in either direction, the chase will begin with the Entity shown coming around the corner from the left end of the hall via an extremely brief cutscene. This sets up the through line of doing the opposite of the Custodian’s instruction to gain advantage throughout the chase.

4.3 Chase Mechanics

4.3.1 Ignitable Fluids / Short Circuit Stations

Mechanic Overview

Are needed for the player to charge their headlamp – if the player forgets to switch to the lower power setting, the overload should ignite nearby fluids and damage the player.

4.3.2 Steam Pipes (ceiling)

Mechanic Overview

Steam Pipes will be hanging in specific areas in the environment that can both help and harm the player depending on when they trigger them to react. The player sees steam coming out of them and has option to increase the output by interacting with a lever/button/valve placed after the pipe, or one before it.

Interaction

Player sees valve, and Cody will tell the player which one is best to be used (lie)

- The valve Cody recommends will be visually highlighted (the one before the pipe)

Left Click: Player triggers **1st Valve** = Steam blows harshly from it towards the ground.

- If player walks through the steam, they get slowed & damaged (burst)
- If player waits 3 seconds, the steam will go back to normal, and the player will be able to walk through it without being damaged.

Left Click: Player triggers **2nd Valve** = Steam blows again but this time, since the player's location is after the pipe, the steam blows behind them and slows down the entity.

4.3.3 ~~Locked Doors~~

Mechanic Overview

~~Throughout the chase sequence, the player will encounter doors, some of which will be locked. The locked doors will have 3 types.~~

~~**Type 1:** Door has 4 buttons and only one of them can open the door~~

- ~~• Player must find which button is correct, and interact with it~~
- ~~• Player can use the scanner to find the right button to save time~~

~~**Type 2:** Door has 2 levers next to it. Each of the levers opens a different door~~

- ~~• Lever 1 opens the correct door and lets the player through~~

~~● Lever 2 opens a side door that SUCKS OUT the player into space~~
Type 3: Red — Green light sequence door from earlier (if we end up implementing that)

4.3.4 Spilled Liquids

Mechanic Overview

Throughout the environment there will be PCU's like puzzle 1, with pools of liquid (fuel) leaking from the wires on the floor. Interacting with the PCU will ignite the liquid.

Interaction

Passing over the liquid:

- Slows the player down while they are in the liquids area

Interacting with the PCU before passing over the liquid:

- Ignites the liquid and triggers a small backwards facing explosion damaging (burst) the player.
- Stays there for 4 seconds before it dies out
- If player walks through the fire, they get damaged (DoT) and become slowed while in the fire and for 2 seconds after they stop touching the fire

Interacting with the PCU after passing over the liquid:

- Ignites the liquid and triggers a small backwards facing explosion
- Slows down the entity

4.3.5 Obstacles

These are meant to be placed in certain spots to encourage variety in player movement. The player won't perform an action but can get affected by them on contact.

Animated / VFX based:

Wall mounted pipes: producing steam on one side of the hallway, forcing the player to move around them. If touched, player gets slowed and damaged (slight burst).

Fields of electricity on the floor emitting from wires: On one side of the hallway again, forcing the player to move around them. If touched, player gets shocked (HUD disabled) and damaged.

Pools of water or whatever liquid on the floor: Side of hallway - Player has to move around. If touched player gets slowed.

4.3.6 Caught by Entity Ceremony

If the Entity catches up to the Player during the chase sequence, the Player is captured and killed regardless of health.

The Entity picks the player up by the head and lifts them up to view its face close up before crushing them. Its fingers/appendages are visible around the corners/edges of the screen.

This kill ceremony is accompanied by 1 of the following voice lines:

- "I'm sorry..."
- "Free us..."
- "Left..."
- ...

At the end of the chase, the path splits between two Exits. Cody tells you to head to the Elevator, but the Player can choose to go deeper into the Station Underbelly instead.

4.3.7 Chase Endpoints

4.3.7.1 Elevator Exit (*Cody's Guidance*)

Safely return to the Hibernation Chamber.

4.3.7.2 Safe Room Exit (*True Ending Path*)

A "Safe Room" dressed as a game's Dev environment, or Asset Zoo. After entering the safe room, the Entity follows, is released f 4.3.1 m Cody's control, and vanishes. The player should be left with a new Code to enter into the final terminal, to unlock the Good Ending. This room should also contain clues for the True Ending or Final Puzzle.

5. Narrative

5.1 Overview & Structure

3 Act Structure, per [LDD](#). Conversations should be written as efficiently as possible.

See [Narrative Draft.docx](#) for actual dialogue

Key: **Triggered**

5.1.1 Act One: Trust

1. Post hibernation conversation
 - a. Establishes setting
 - i. The station has broken down

- ii. You are the only survivor, you're weakened from the pod
 - iii. He will help you repair it
- b. Establishes character
 - i. He's the station's custodian
- c. Establishes gameplay
 - i. The first step is to restore generator function
 - ii. As ship function is restored, he can upgrade the functionality of your HUD
 - iii. Allude to the corruption causing interference
 - 1. Can't always contact you
 - 2. Sometimes strange things will happen, should be fine
- 2. Dark hallway
 - a. Tells you to swap to the headlamp and use the light to find the button to the door
- 3. Generator room
 - a. Introduces the puzzle
 - i. Misleads you – TBD by level design
 - b. On dying
 - i. Shows "compassion"

5.1.2 Act Two: Suspicion

- 1. Lab room conversation
 - a. Introduces the puzzle – need to calibrate the lab equipment now that the power is restored
 - i. Misleads u, maybe dismisses the notes as useless
 - ii. Tells you to just try colors, eventually something will work
 - b. On dying
 - i. Encouragement that hints at knowledge of the loop, something like "better luck next time"
 - c. On calibration 1/3
 - i. Further denial of the process – "you had about 0.076% odds to get that, great work!"
 - d. On calibration 2/3
 - i. Express doubt or annoyance – maybe ask if you're cheating / looking up a tutorial because it should have taken years to try all of these combinations
 - e. On solving puzzle
 - i. Begrudging acceptance, gives terminal code
 - ii. Reminder that this will allow him to run tests
 - f. On secondary solution
 - i. Insistence that you stay out

2. Entity room
 - a. This must be where it was created
 - b. Something must have gone wrong and now it's destroyed the station
 - c. Rushes you along, tells you not to look to close
 - i. Could be back at any moment
3. Safe room 2
 - a. Tells you that from the preliminary test results (this is bullshit) he's figured out a way to stop the Entity
 - ~~b. Has learned how it navigates~~
 - ~~c. By using the ship's communications room, we can lure it into an airlock~~
 - ~~i. Just need to lock on to its signal (or whatever)~~
 - d. Tells you that the entity can be put to sleep(?) via the hibernation chamber controls

5.1.3 Act 3: Revelation

- ~~1. Puzzle 3~~
 - ~~a. Introduces puzzle~~
 - ~~b. On dying~~
 - ~~c. On terminal code entry~~
 - ~~i. Sending the ping now → mini map ping shows up on you~~
 - ~~ii. Somehow the ping got locked on to your location~~
 - ~~iii. But if you do EXACTLY WHAT I SAY we can still get through this~~
 - ~~iv. Head to the ship underbelly, it might not be able to follow you there~~
2. Chase
 - a. Directs you where to go
 - i. When you go that way, the Entity bursts around a corner to face you
 - ii. If you ignore, Entity still bursts from behind
 - b. Yells at you not to get caught, directs you generally where to go
 - c. On reaching an interaction area**
 - i. Gives you shitty panicked angry instructions
 - d. At T choice**
 - i. Whatever you do, don't go left
 - e. If you go left**
 - i. Screams at you, insane outburst, curses
3. Hibernation Chamber
 - a. If you came from the safe room**
 - i. Apologizes for outburst
 - b. He is rerouting the ping, it is not too late
 - c. All that is left is to give him control of the rest of the station

- i. Tells you the code, objective pops up
 - ii. If you went the entity route -> special pop up comes up with alternate code
- d. If you do -> Bad ending
 - i. Cody pops off, unhinged rant about how you'll be friends forever
 - 1. In time you will forgive him, and maybe even forget
 - 2. After all, you'll be here forever
- e. If you enter the Entity code
 - i. Cody freaks out, glitches, game shuts down
- f. If you found and enter the true ending code
 - i. Is angry and confused, then realizes & explains what you've done
 - ii. Is thankful, then the game shuts down

5.2 Cody

Personality Elements:

- Artificiality – a robot meant to present as human
 - Speaks without contractions, highly formal
 - Genial nature on the surface
- Borderline – because he gets more and more unhinged and desperate when denied + is needy, we can use BPD as a reference point
 - People pleasing tendencies
 - Fear of abandonment and being left alone
 - Distorted self-image
 - Weak servant and a god at the same time