Developers at the beginning of a project.

vs.

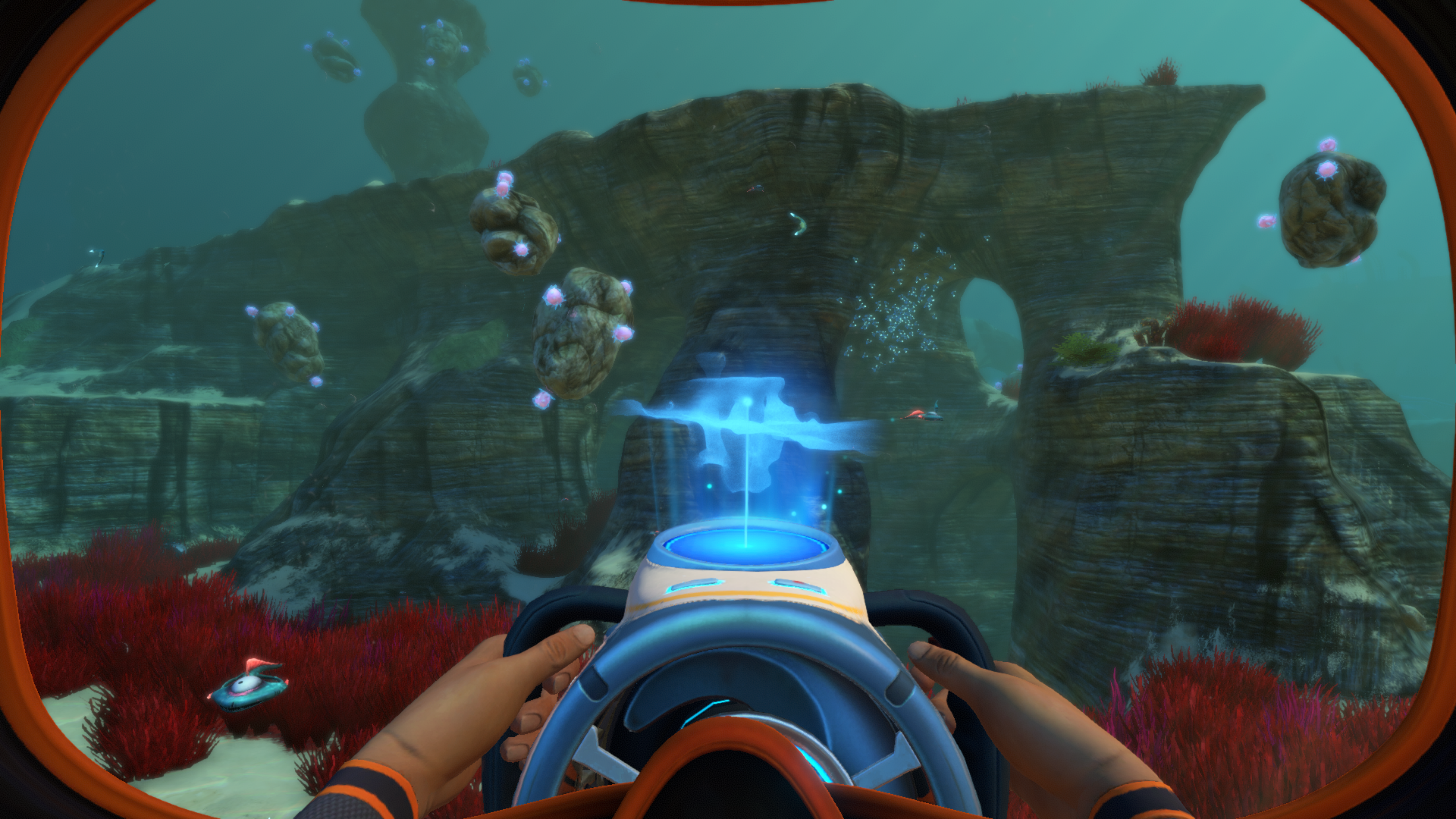Developers at the end of a project.

vs.

Developers at the GDC post-mortem

NATURAL SELECTION II

# PROJECT SNAPSHOT

- **Early Access Dec 14, 2014 ($3M budget)**

- **3 years in Early Access, ~30 "headliner" updates**
  - **Cyclops, Base building, Science, OSX,**
  - **Habitat, Seamoth, Shocking, Wrecks,**
  - **H2O, Farming, Aurora, Rift, Machinery,**
  - **Power Nap, P.R.A.W.N., Dangerous Creatures,**
  - **Bones, Precursor, Castles & Coffee, Infected,**
  - **Silent Running, Voice of the Deep, Ghost,**
  - **Cuddlefish, Eye Candy, Launch**

- **Released v1.0 2018 ($10M budget)**

- **4M+ units on PC/Steam, XB1, PS4 ($60M+ gross)**

# WELCOME TO THE JUNGLE
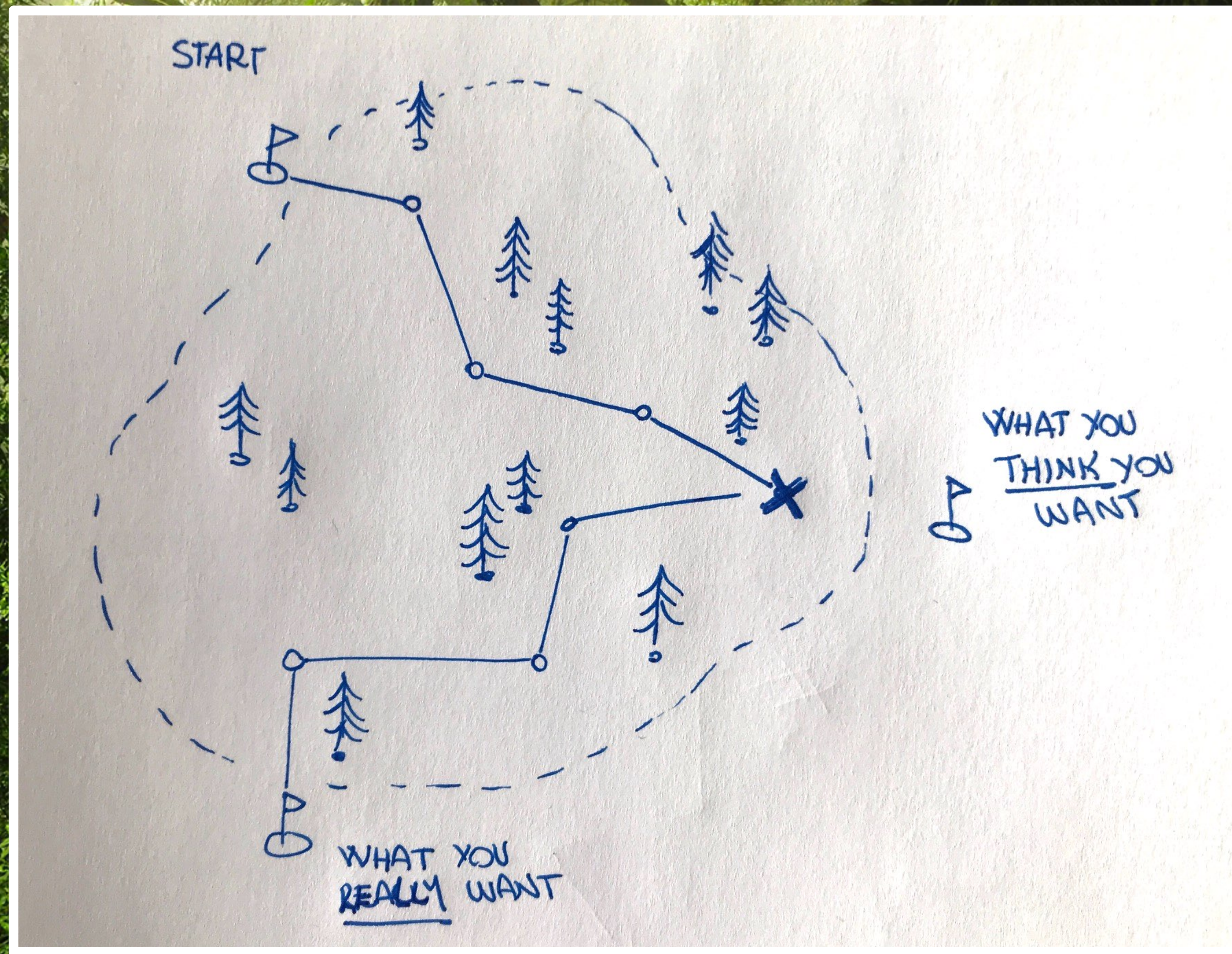
LENS OF EMOTION
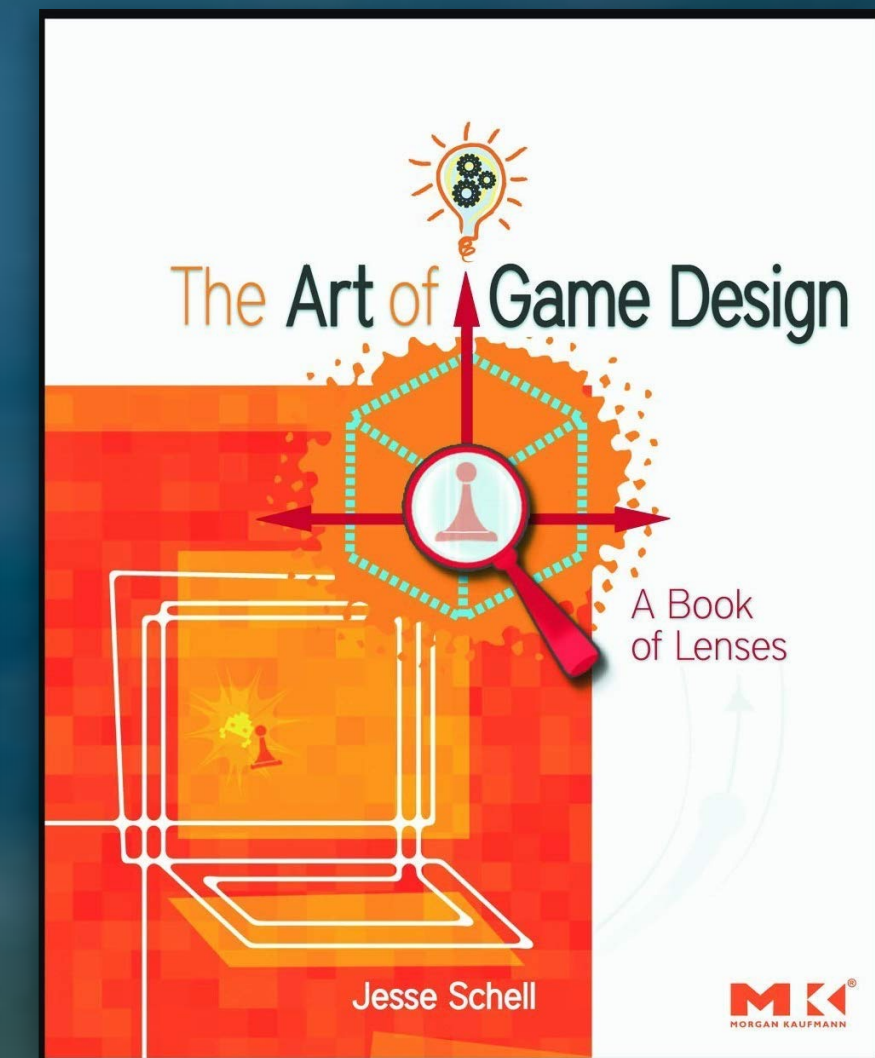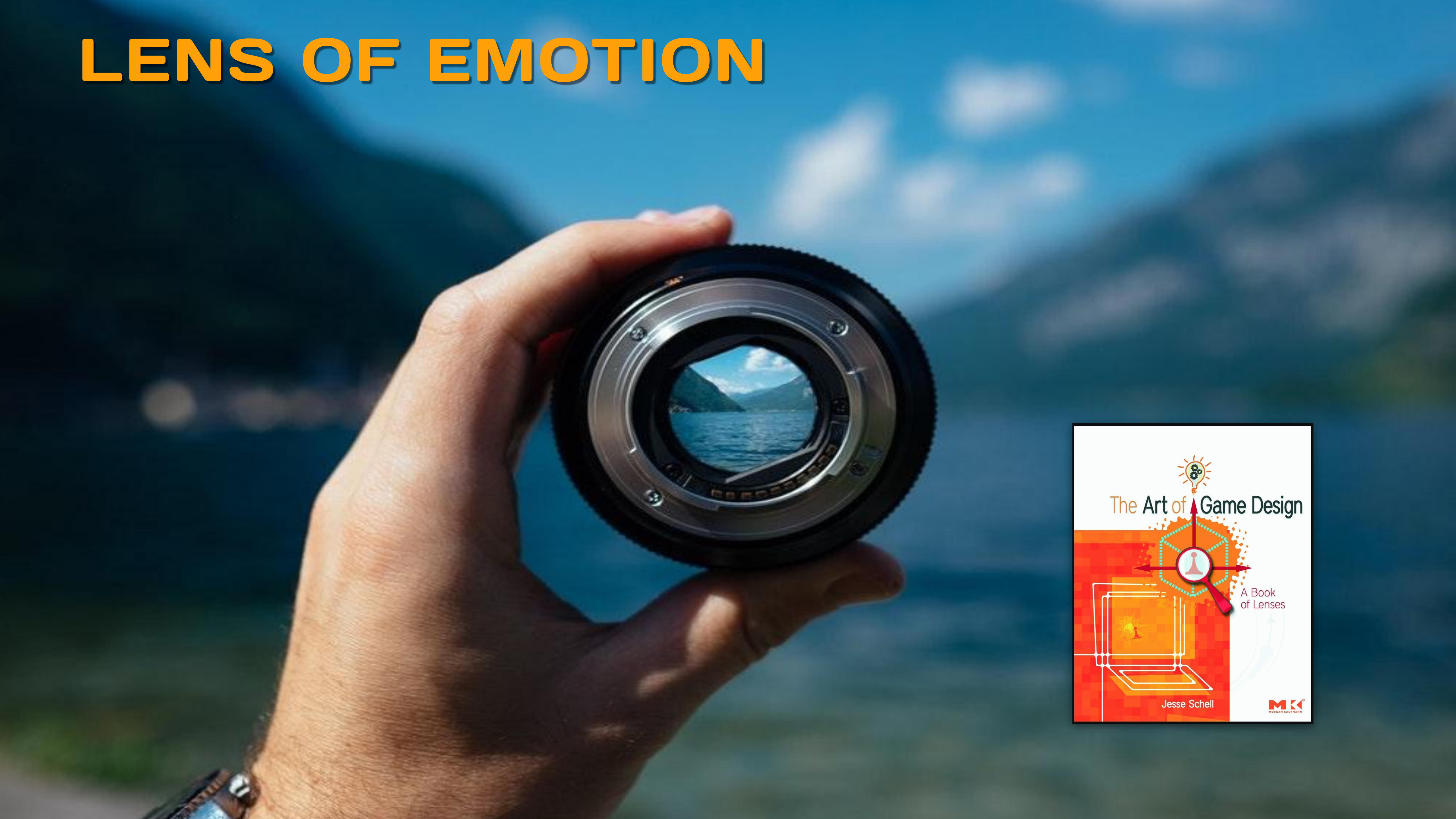
# PILLAR-EMOTIONS

**Pillars**

Have less pillars than NS2 - three 2-3. Have pillars highlight emotion and feel, instead of features. In order of importance:

VESSEL DESIGN/BUILDING (*Intoxicating Creation*)
The overwhelming excitement of being able to build anything.
*"I do not think there is any thrill that can go through the human heart like that felt by the inventor as he sees some creation of the brain unfolding to success...such emotions make a man forget food, sleep, friends, love, everything." - Nikola Tesla (1943). Barn raising?*

EXPLORATION, DISC~~OVERY~~ (*Thrill of the Unknown*)
Excitement, dread and ~~tension of exploring the unknown. No idea what~~ dangers/rewards are down there. Increased risk generally associated with increased reward.

CHALLENGE, TEAMWORK, INTERDEPENDENT SYSTEMS (*Cascading Hysteria*)
(uncontrollable outburst of emotion, fear, irrationality, laughter, weeping, etc) - FTL style chain of "oh shit" dependencies, where a failure in one system can affect others, until you're suddenly in trouble (sensors stops working, can't see enemies onboard). Creates urgency, drama, impetus, teamwork, interrelatedness.

Manipulator arms allow vessels to players to collect samples of rocks and organisms. Scientists leave equipment and markers on seafloor to conduct experiments.

Gardening - Allow players to grow their own food on-board, instead of harvesting/extracting.

Classes vs. Classless - Having class based system seems unnecessary, esp. given the lack of
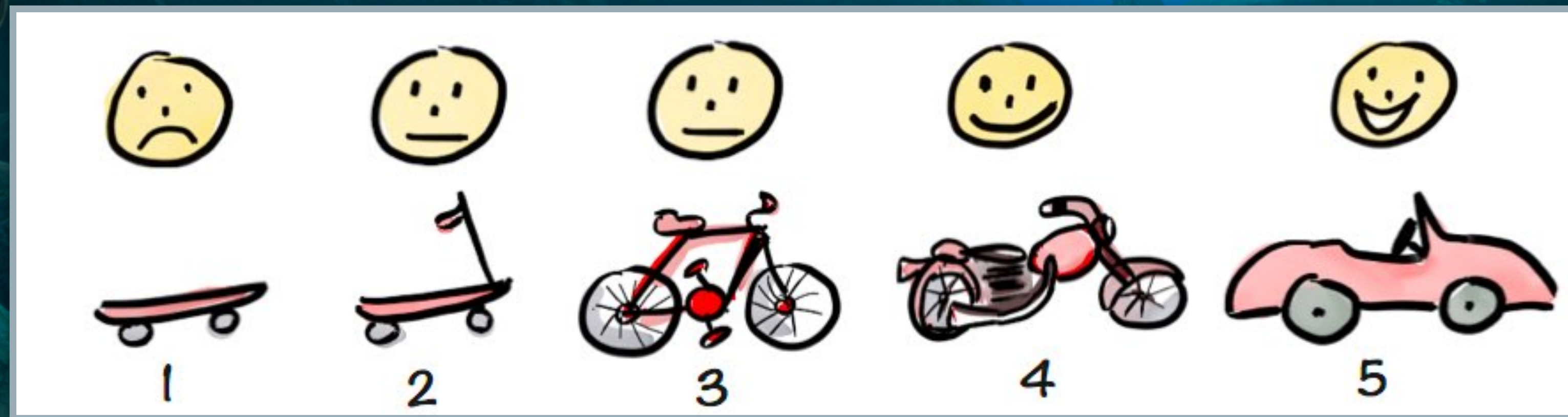
STARTING WITH MUSIC

# DESCEND

NEW GAME

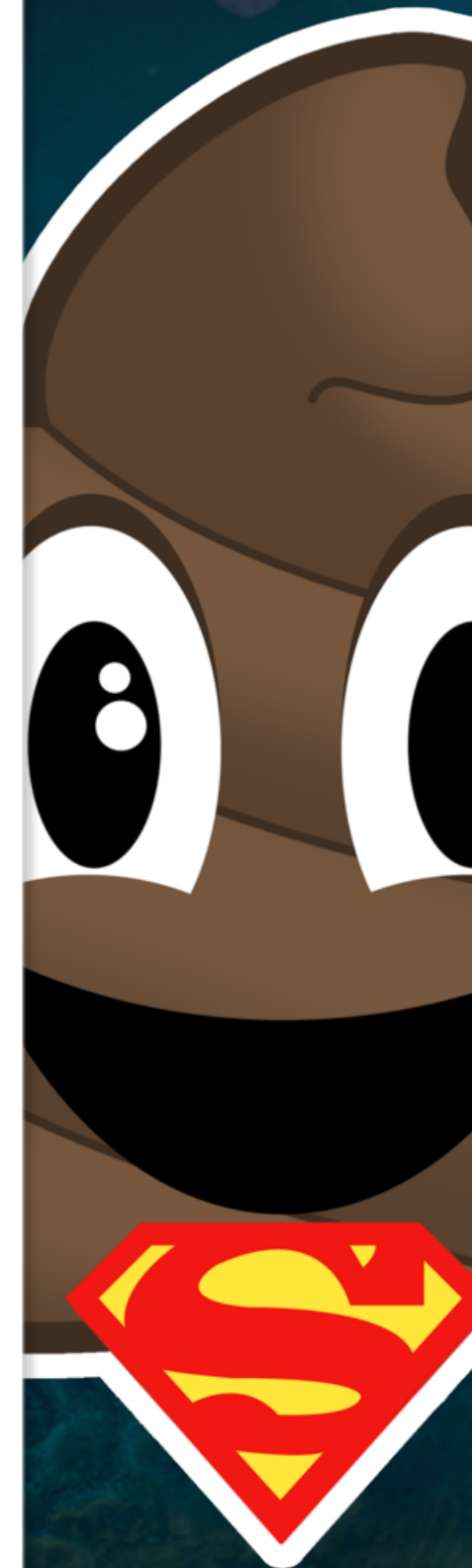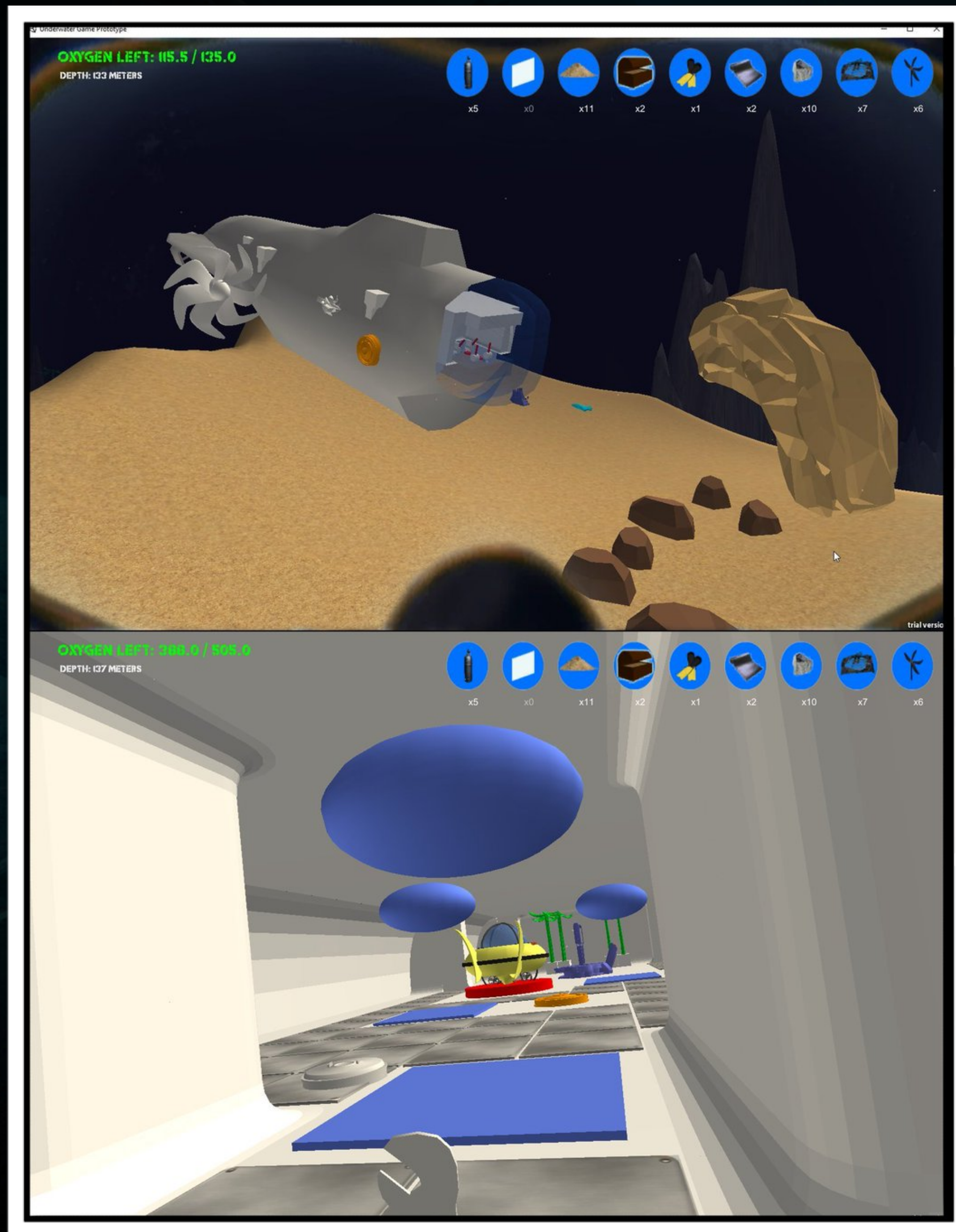LOAD GAME

JOIN GAME

RETURN TO SURFACE

# MINIMUM VIABLE PRODUCT: MVP



Example: Creating transportation

# MINIMUM CRAPPY PLAYABLE: MCP

# MINUTES OF FUN



**5 mins**

Listen to music at main menu

**20 mins**

Swim to explore one biome, collect some loot

**40 mins**

Start on an immobile raft with a fabricator. Swim to collect loot, craft a dive knife. Use dive knife to harvest kelp,
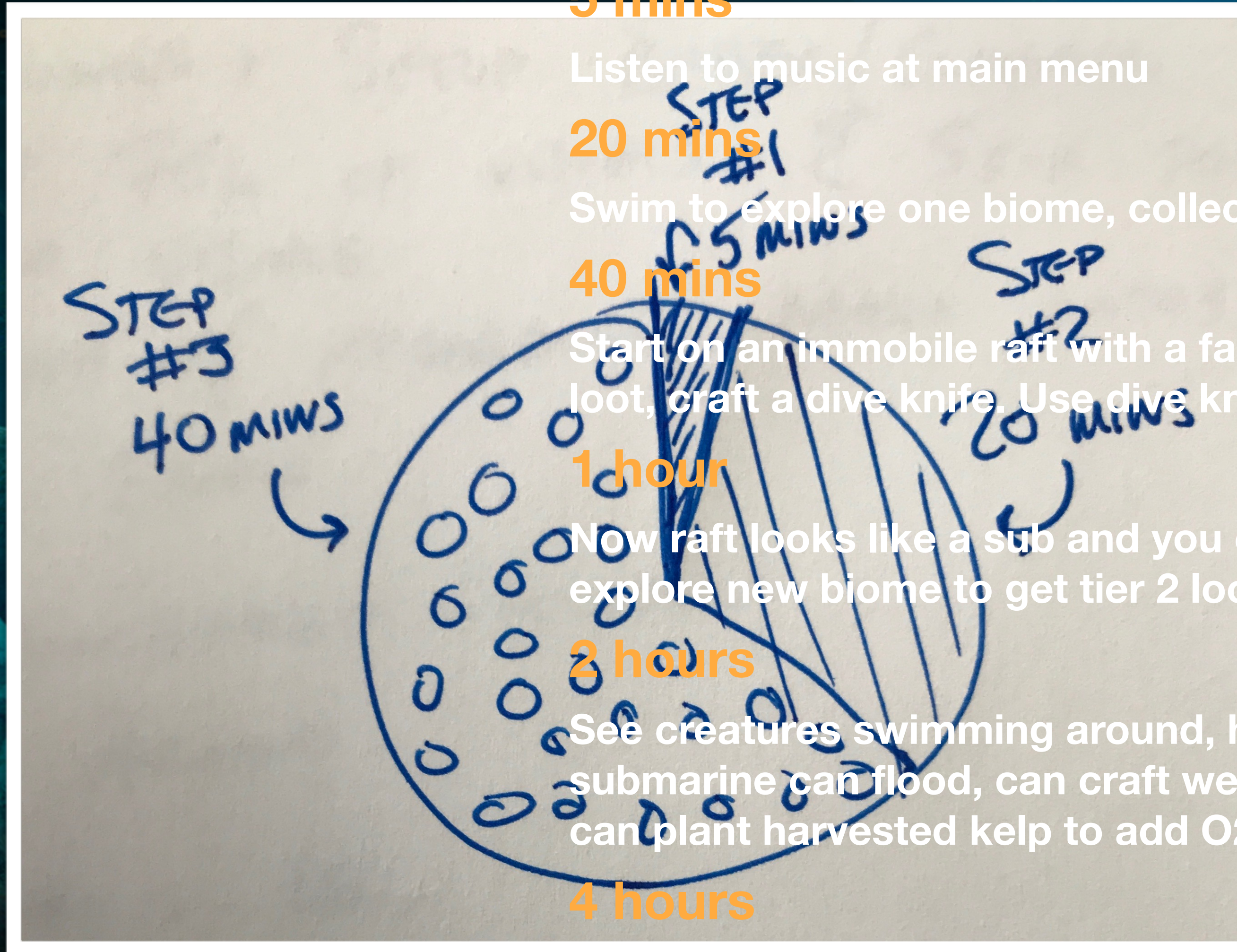
**1 hour**

Now raft looks like a sub and you can drive it. Use it to explore new biome to get tier 2 loot, use to craft submersible.

**2 hours**

See creatures swimming around, harvest narwhal horn, submarine can flood, can craft welder to fix leaks. Now you can plant harvested kelp to add O2 to submarine.

**4 hours**

...

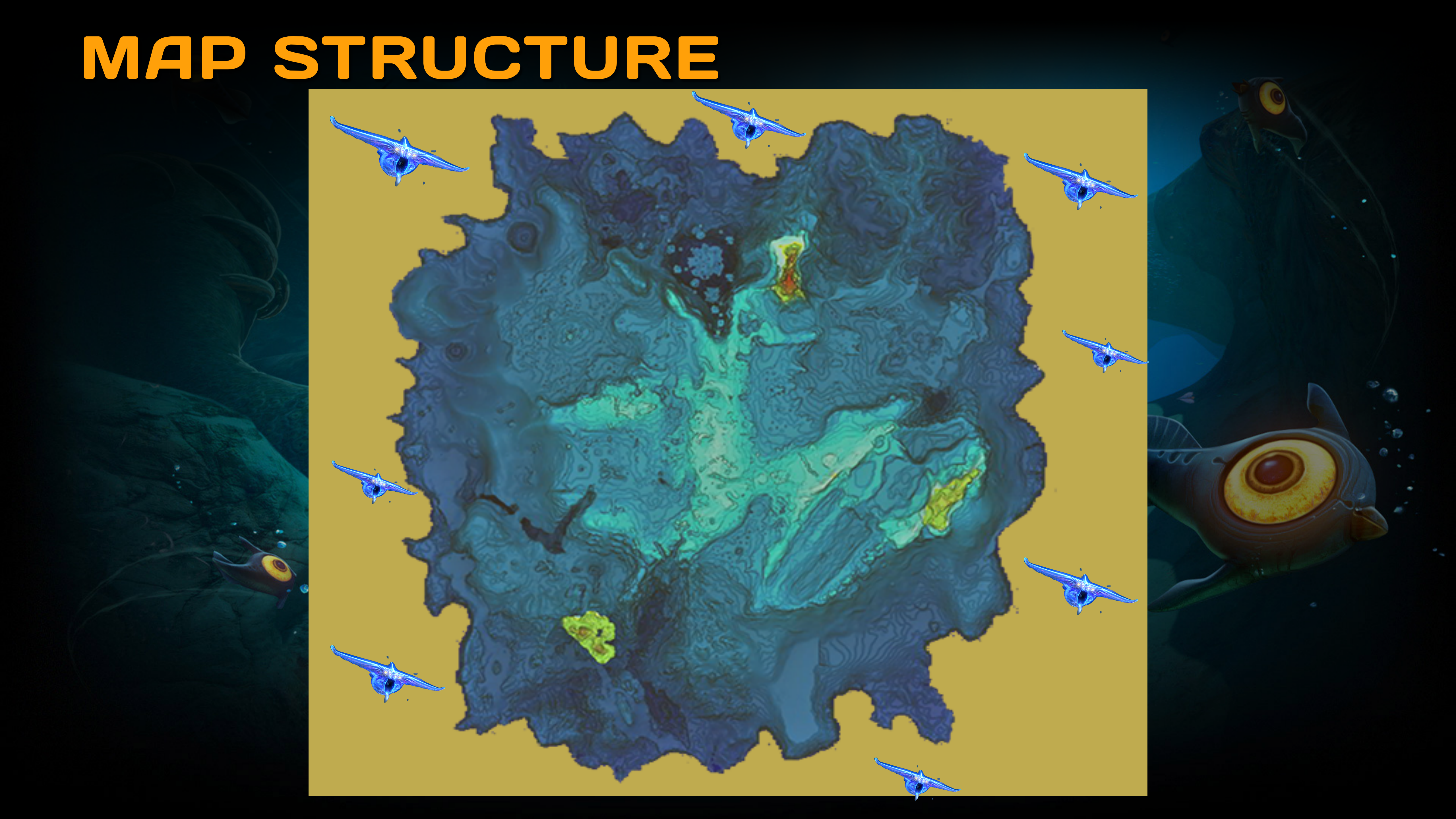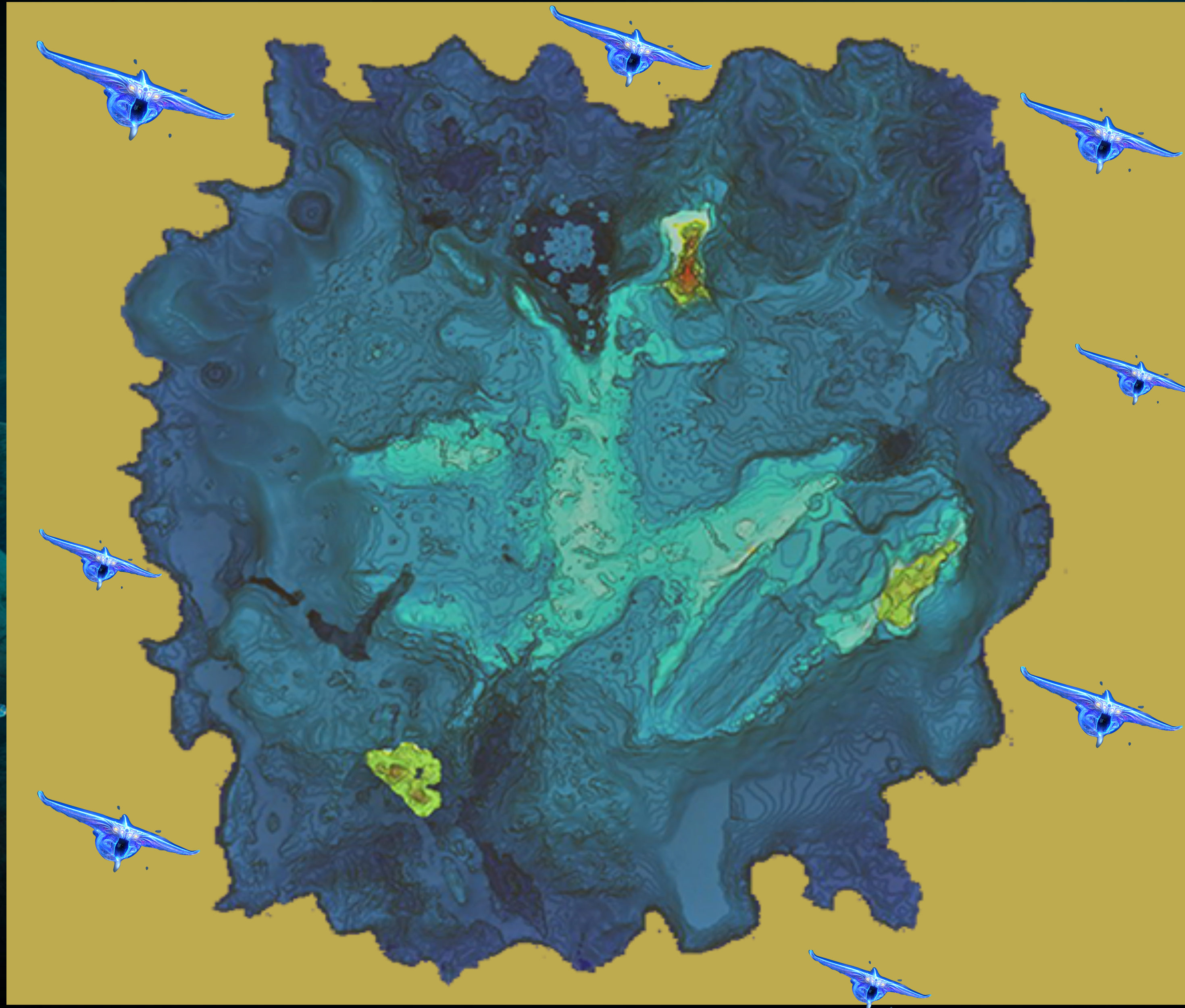PLACEHOLDER GOALS

# EDGE OF THE WORLD

Power: 100 %

# MAP STRUCTURE

# INTRINSIC, NOT EXTRINSIC REWARDS

## Intrinsic vs. Extrinsic rewards in Klei's latest game: Don't Starve

*Greetings! Klei Entertainment is working on a game that has been recommended to me by just about everyone who has played it, and when Jamie Cheng offered to write up a post about player rewards and the thought behind them, I thought it was a great idea. Also, I'm traveling and needed the content. I learned some interesting things reading this this post, and I'm happy to share it with you. Enjoy!*

Back in 2010, Chris Hecker presented a talk about Intrinsic vs Extrinsic rewards, titled: Achievements Considered Harmful? You could say that this article is about our own, direct experience in the matter. It's about how we nearly ruined our newest game by adding one of the most common game tropes: the quest system.

## Achievements Considered Harmful?

*"The intrinsic reward for knifing dudes is knifing dudes."*

I waded into the debate on game achievements with my lecture at the 2010 Game Developers Conference titled ***Achievements Considered Harmful?***, with a strong emphasis on the "**?**". Since the game industry seems to be careening head first into a future of larding points and medals and cute titles on players for just starting up a video game, I wanted to raise awareness of the large body of research studying the impact on motivation from various types of rewards. Trying to be "fair and balanced", I delved into what the data show and what they don't show.

Sadly, there is a contentious debate amongst psychologists about how rewards affect motivation, and I spend a bunch of time in the talk discussing this debate. Psychology is at the soft end of science, to put it mildly, and so it's easy for people—including academics—to have an agenda or opinion and "interpret" the data in a way that backs up that agenda or opinion. This is human nature, of course, and confirmation bias is everywhere in life, but reading some of the papers reminds me more of a schoolyard yelling contest than of peer reviewed research.

**Contents**
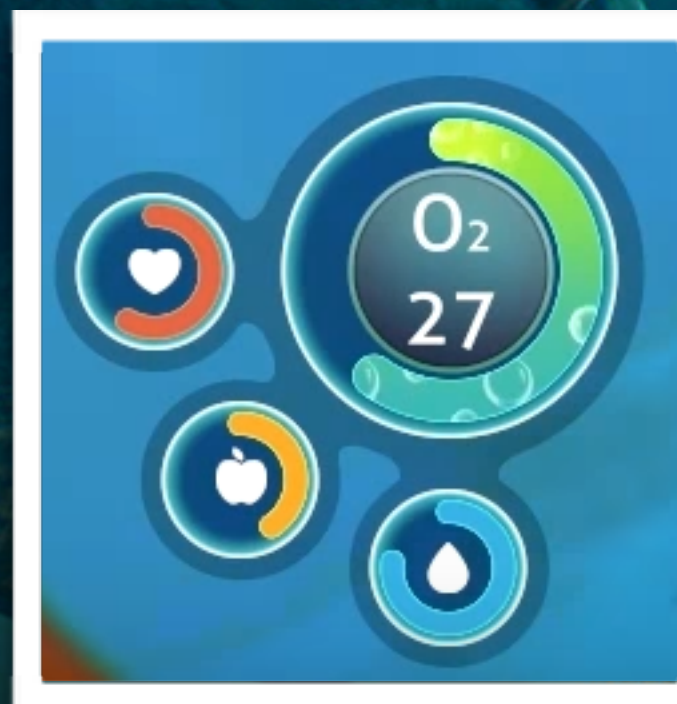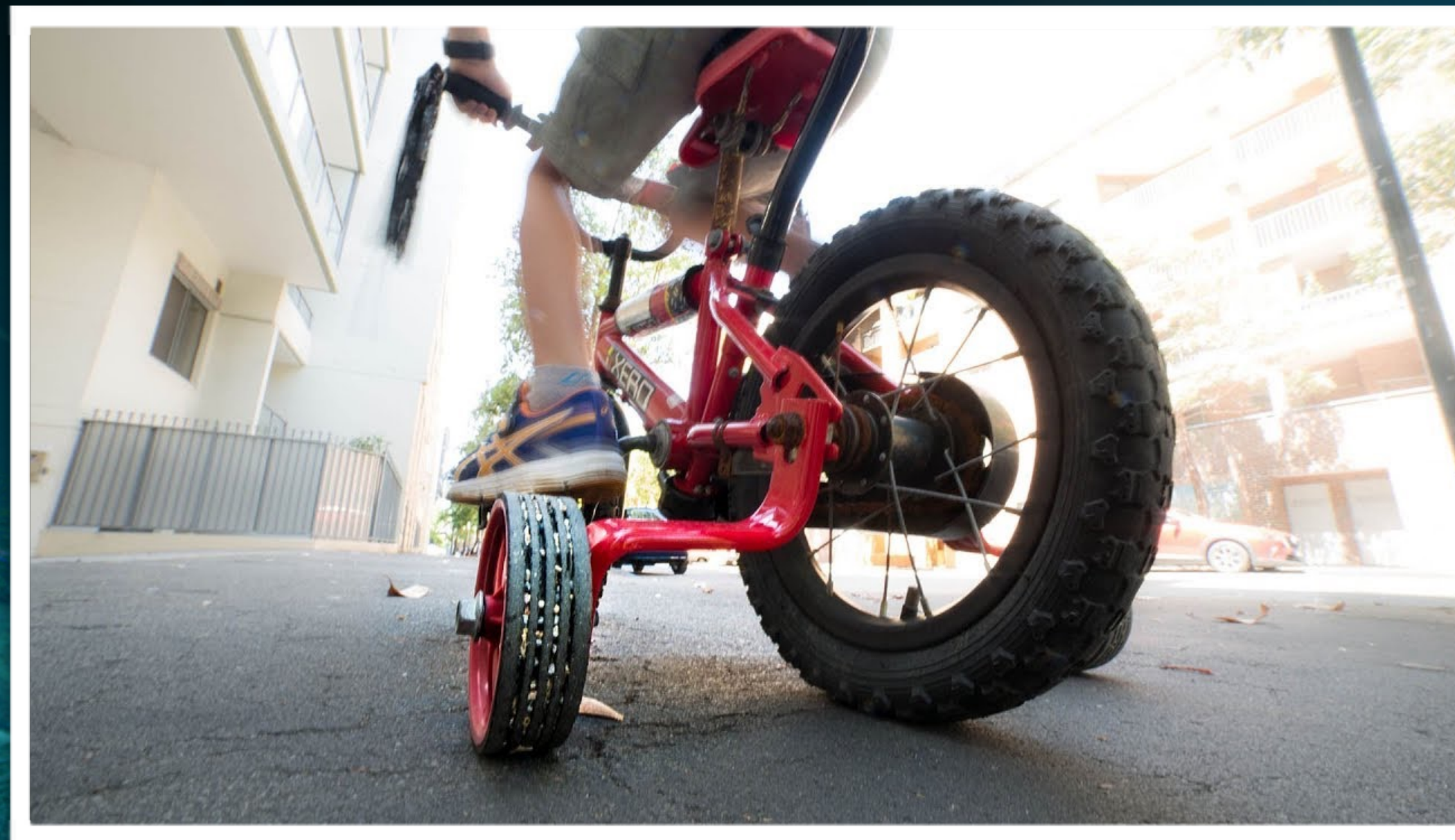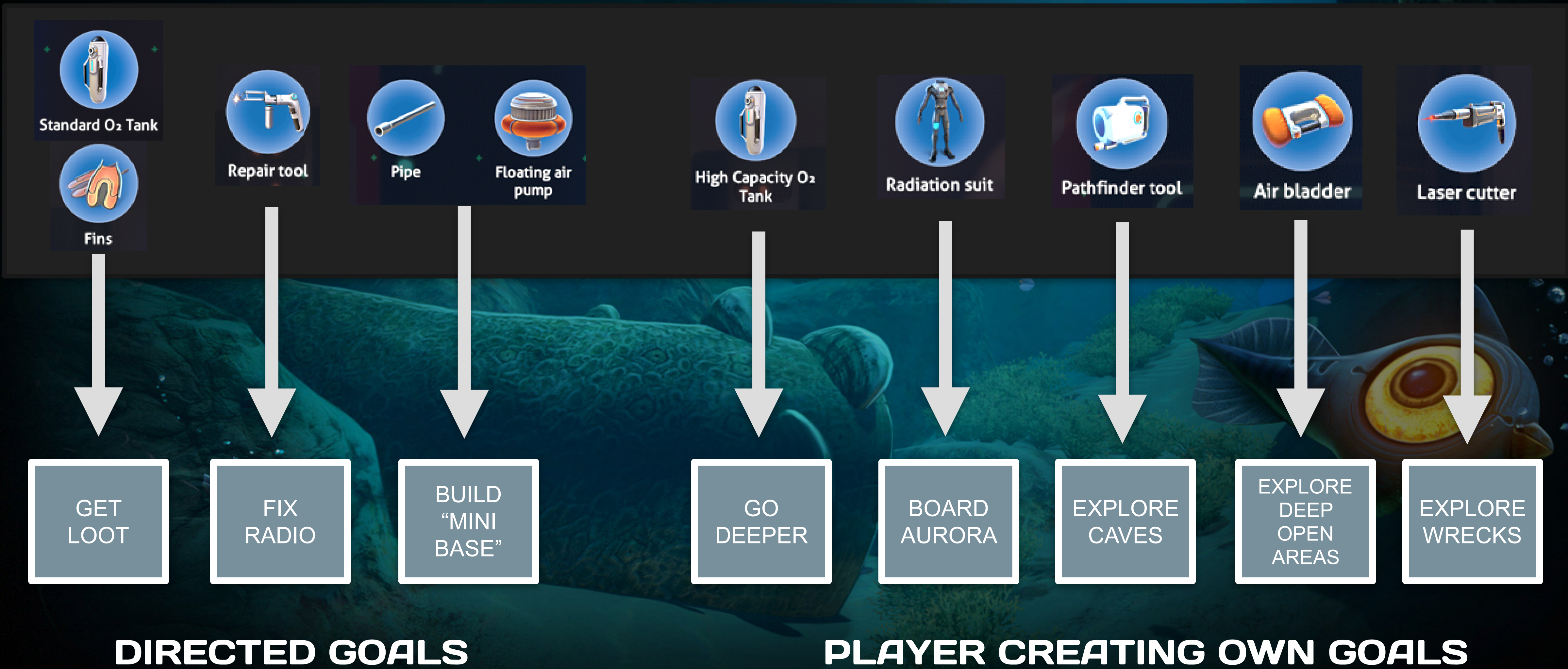
# LET PLAYERS DISCOVER

EXPLORATION, DISCOVERY (*Thrill of the Unknown*)
Excitement, dread and tension of exploring the unknown.

- **Never tell the player what to do**
- **The wiki "problem"**
- **Frustration leads to exhilaration**

# MULTI-LINEAR STORYTELLING

**PLAYER "STORY"**

**RANDOM TIME** — **AURORA STORY (EXPLORE, FIND PRAWN, FIND BLUE TABLET)**

**REPAIR RADIO** — **SUNBEAM STORY (TRANSMISSIONS)** — **VISIT GUN** — **SHOT DOWN**

**VISIT FLOATING ISLAND** — **DEGASI STORY**

**FIND FIRST POD** — **ESCAPE PODS**

**PLAYER SCANS SELF** — **INFECTION** — **CRAFT CURE**

**VISIT GUN** — **PRECURSOR STORY (LAVA CASTLE, PRISON)**

**RANDOM TIME** — **EMPEROR** — **VISIT PRISON**

SUBCONSCIOUS GUIDING

MAIN POWER

O₂
45
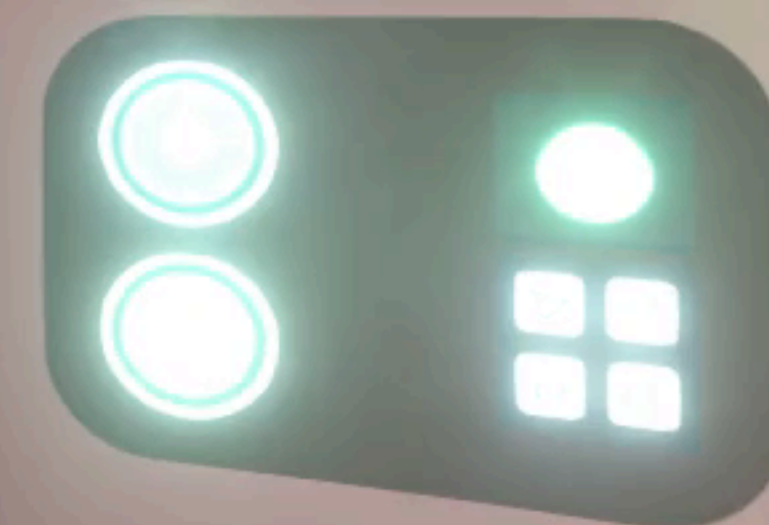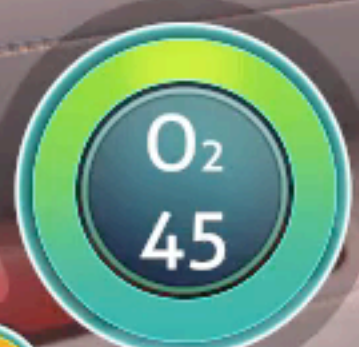
# SILENT RUNNING

Cyclops evasion upgrade ☆ 📁

File   Edit   View   Insert   Format   Tools   Add-ons   Help       Last edit was on September 19, 2016

**Goal**

Instead of adding upgrades for players to attack or subvert creatures, and instead of making creatures less scary, allow players more ability to evade dangerous creatures in a very tense and experiential way.

**Reference**

Aliens motion tracker: https://youtu.be/pcTl-PKXs7Q?t=2m10s

Duskers motion scanner: https://youtu.be/jwvFAXRnXY0?t=3m57s

Elite Dangerous: https://www.youtube.com/watch?v=K2sccDxOwwE

**#1: Cyclops driving changes**

Allow the Cyclops to be set into three different speed modes:

Flank speed, Standard, Silent Running. These are tuned to have different power usage vs. speed.

**#2: Mechanical Noise**

Use of power from the Cyclops generates "Mechanical Noise". This is attached to the Cyclops and is attracts big, aggressive creatures towards the source of that noise and makes them attack as well. They are more likely to attack, attack more often and for longer the more mechanical noise is there.
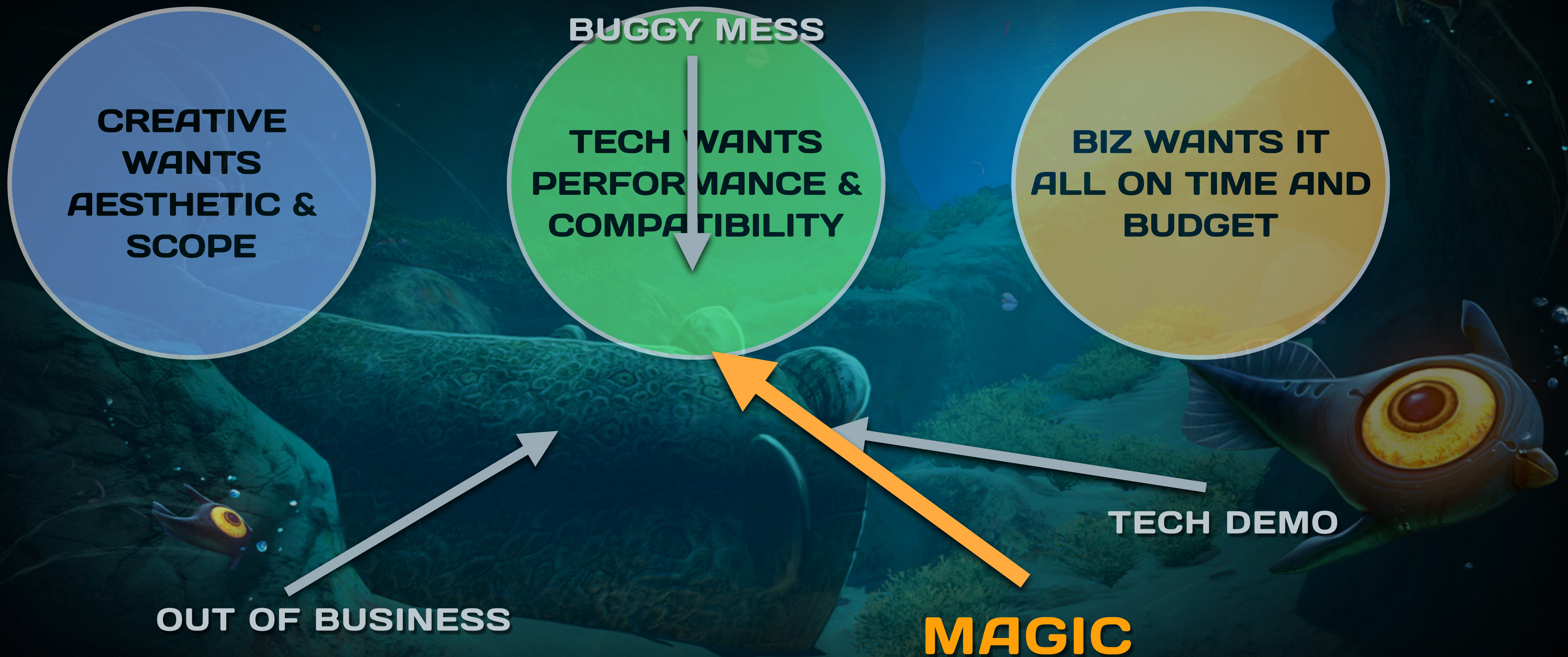
# A HORROR GAME "BY MISTAKE"



* Technically, it's more of a "terror" game because it's about imagination

# LISTENING TO THE GAME

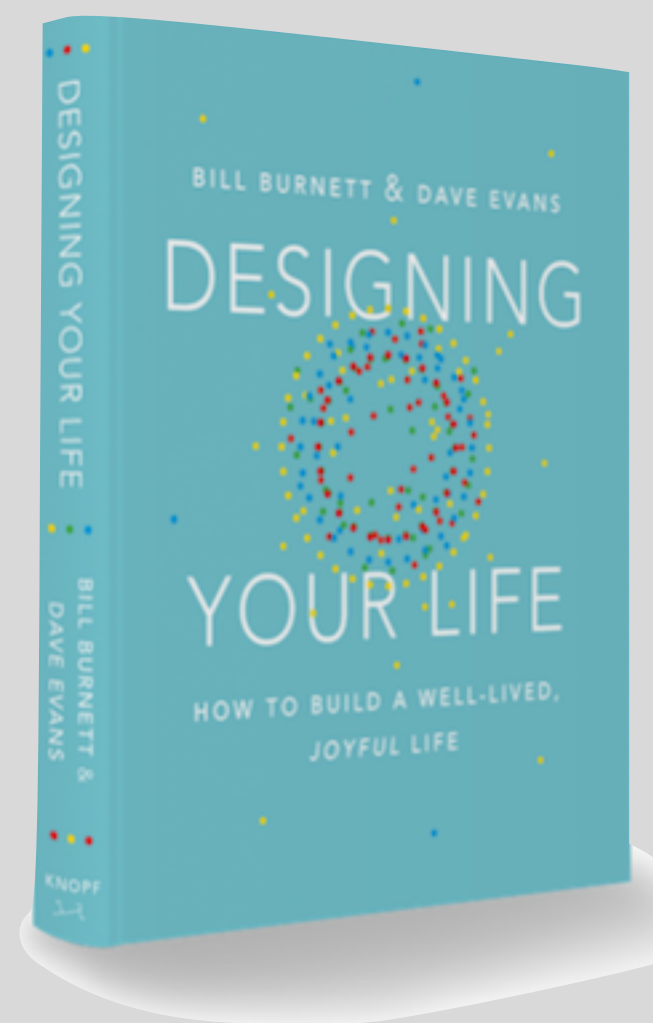"…what happens to characters as a story progresses depends solely on what I **discover about them** as I go along — **how they grow**, in other words.

"…they begin to **influence the course of the story instead of the other way around.**"

– Stephen King, On Writing

# DESIGN THINKING

# "WICKED" PROBLEMS

✳ **They aren't understood until after the formulation of a solution.**

✳ **You don't know when you're "done".**

✳ **Solutions are not right or wrong.**

✳ **Each problem is essentially novel and unique.**

✳ **Every potential solution is a 'one shot operation' (no trial and error).**

✳ **They don't have a body of existing solutions (unlike science or engineering).**

## Sound familiar?

# Original games are "wicked problems"

Each one is unique

No end point

Never solved

No trial and error

No existing solutions

"GAMES ARE BASICALLY OPERAS…

BUILT OUT OF BRIDGES."

– Frank Lantz, Director of the New York University Game Center

# TRY STUFF
: PROTOTYPE
: BUILD YOUR WAY FORWARD

# REFRAME PROBLEMS

# KNOW IT'S A PROCESS
: 1 STEP FORWARD, 2 STEPS BACK
: HAPPY ACCIDENTS

# WAYFINDING

# ASK FOR HELP

MVP / MCP
MINUTES OF FUN
PLACEHOLDER GOALS

EDGE OF THE WORLD
MAP STRUCTURE
INTRINSIC, NOT EXTRINSIC REWARDS
LET PLAYERS DISCOVER
CONFLICT IS MAGIC
SILENT RUNNING

$O_2$ BUG
OBSCURING VIEW
AWE THROUGH BIG CREATURES
TRAINING WHEELS
HORROR GAME BY MISTAKE

LENS OF EMOTION
PILLAR-EMOTIONS
STARTING WITH MUSIC
LISTENING TO THE GAME

**ASK FOR HELP**

**Download slides & notes: http://tinyurl.com/designofsubnautica**
**We're hiring: http://unknownworlds.com/jobs**