



INDEPENDENT GAMES  
SUMMIT



# Subnautica Postmortem

Jonas Bötzel

Lead Programmer, Unknown Worlds Entertainment

GDC

GAME DEVELOPERS CONFERENCE

MARCH 18–22, 2019 | #GDC19

# Subnautica

First-person

Single-player

Underwater

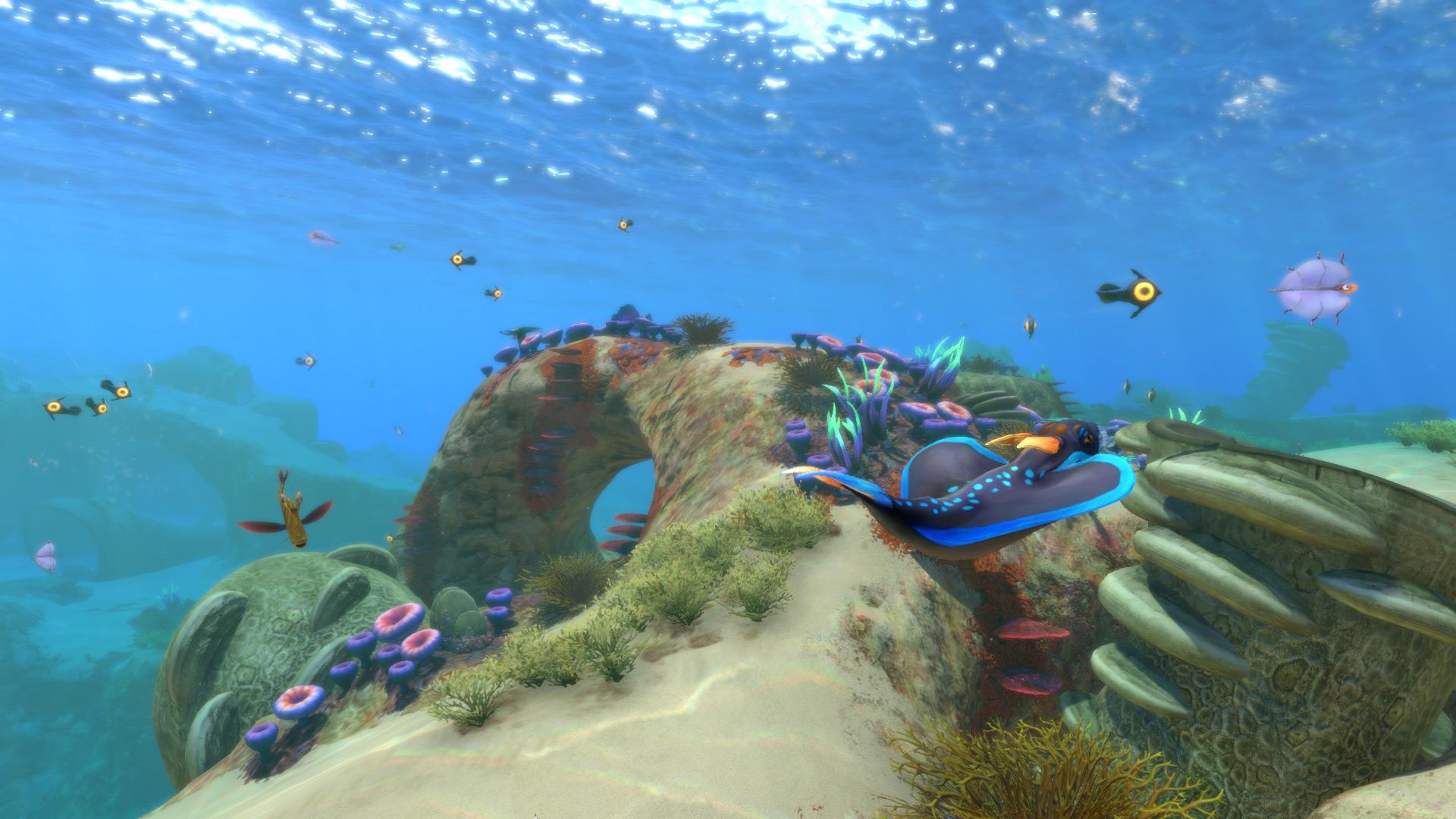
Adventure



9 m  
E

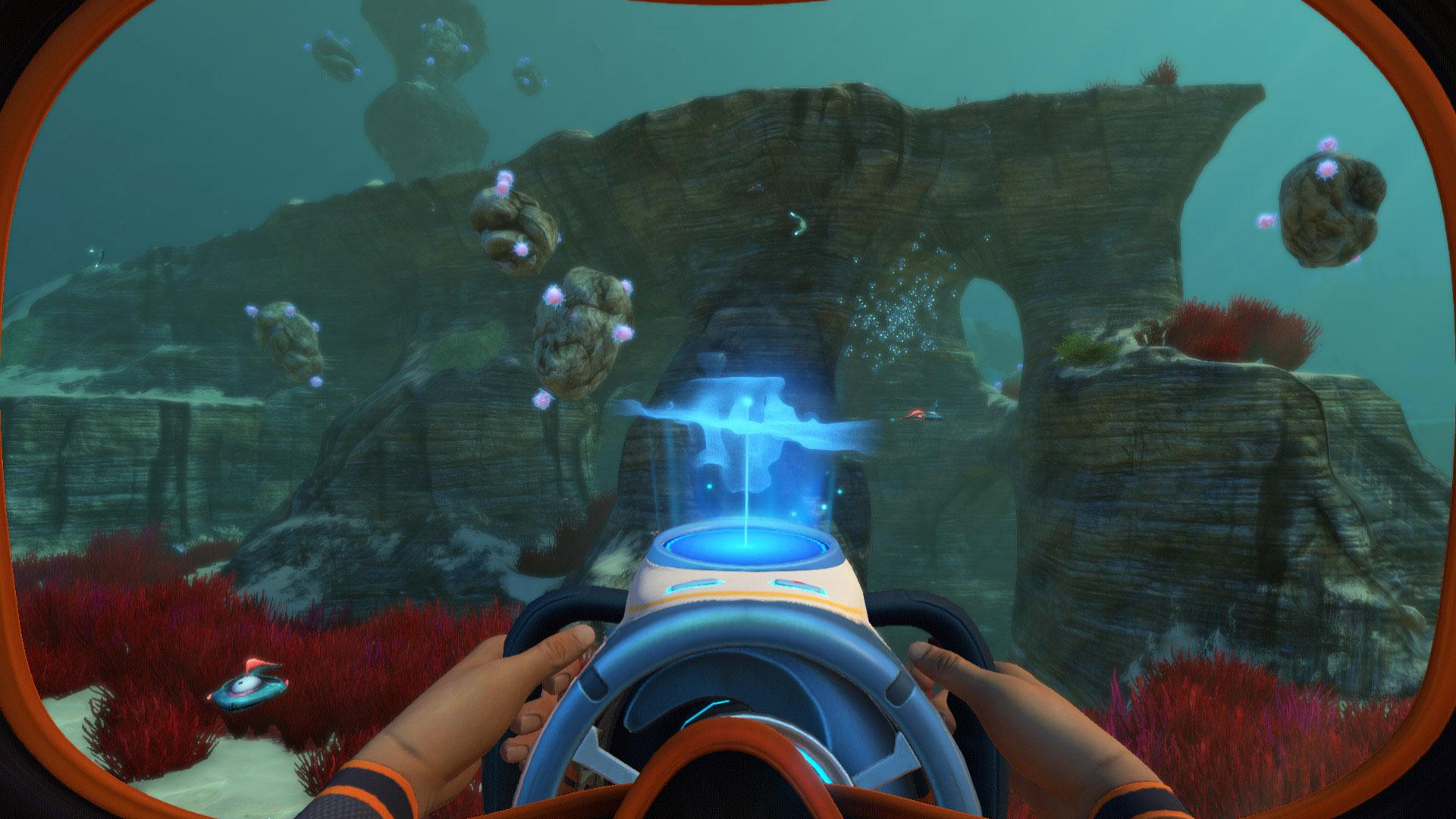




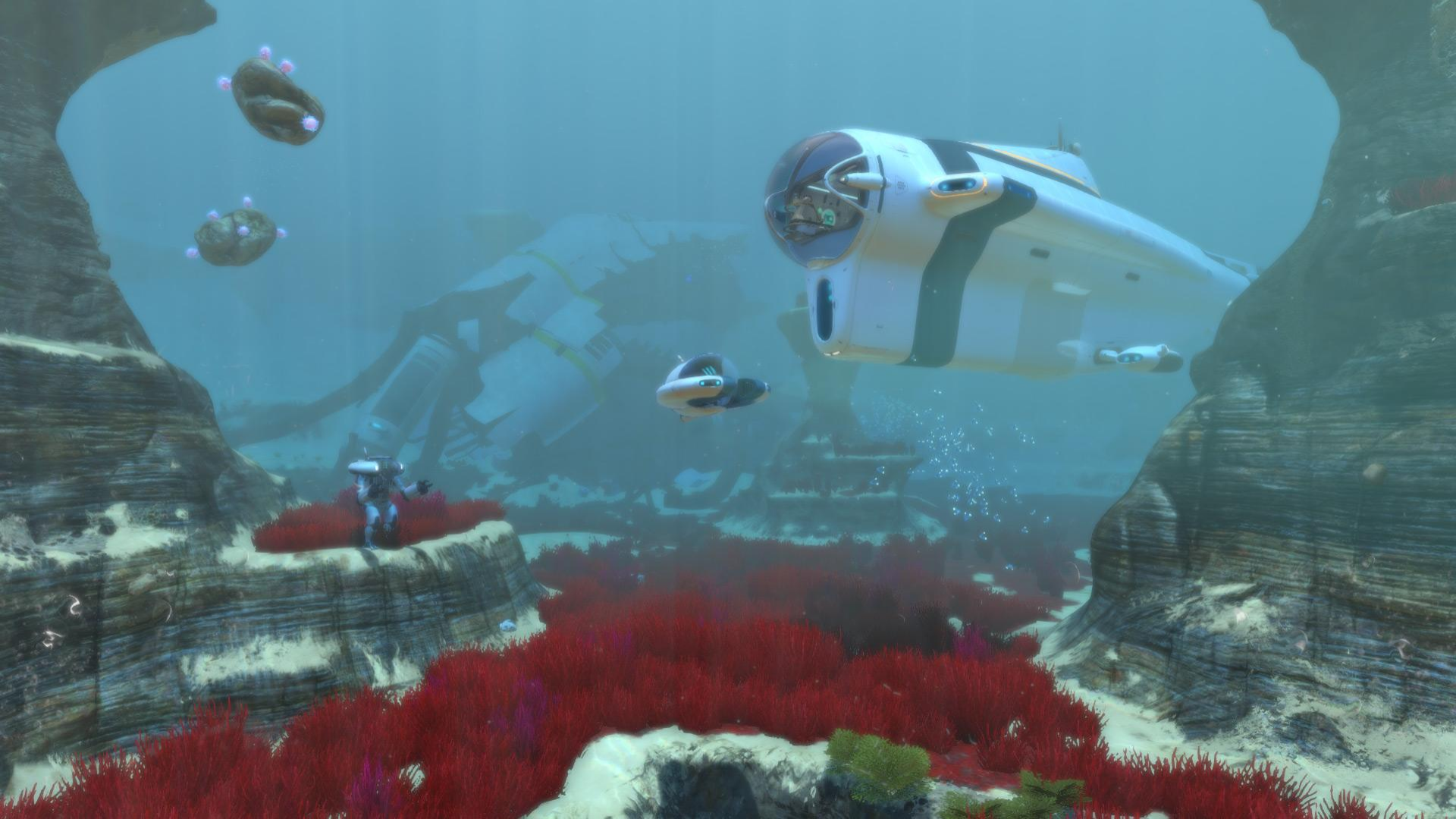
























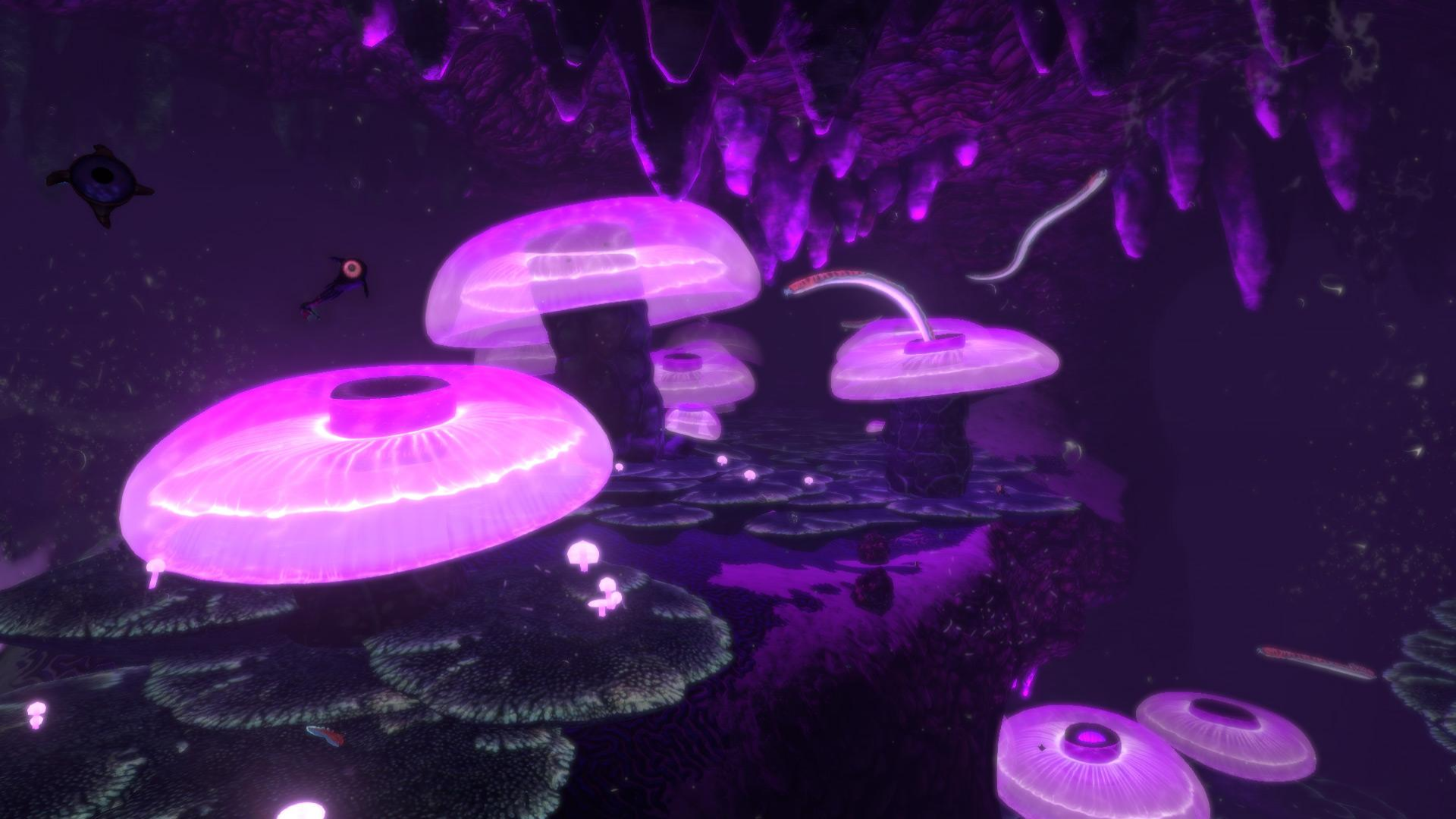
































cefyn

0 m

W

BX

SEARCHING...

Self-scan (A)

intel













# SUBNAUTICA

ROCKET LAUNCH ENDING





# Subnautica

First-person

Open world

Single-player

Exploration

Underwater

Survival

Adventure

Story





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# Product

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# Subnautica

PC & Mac

Steam

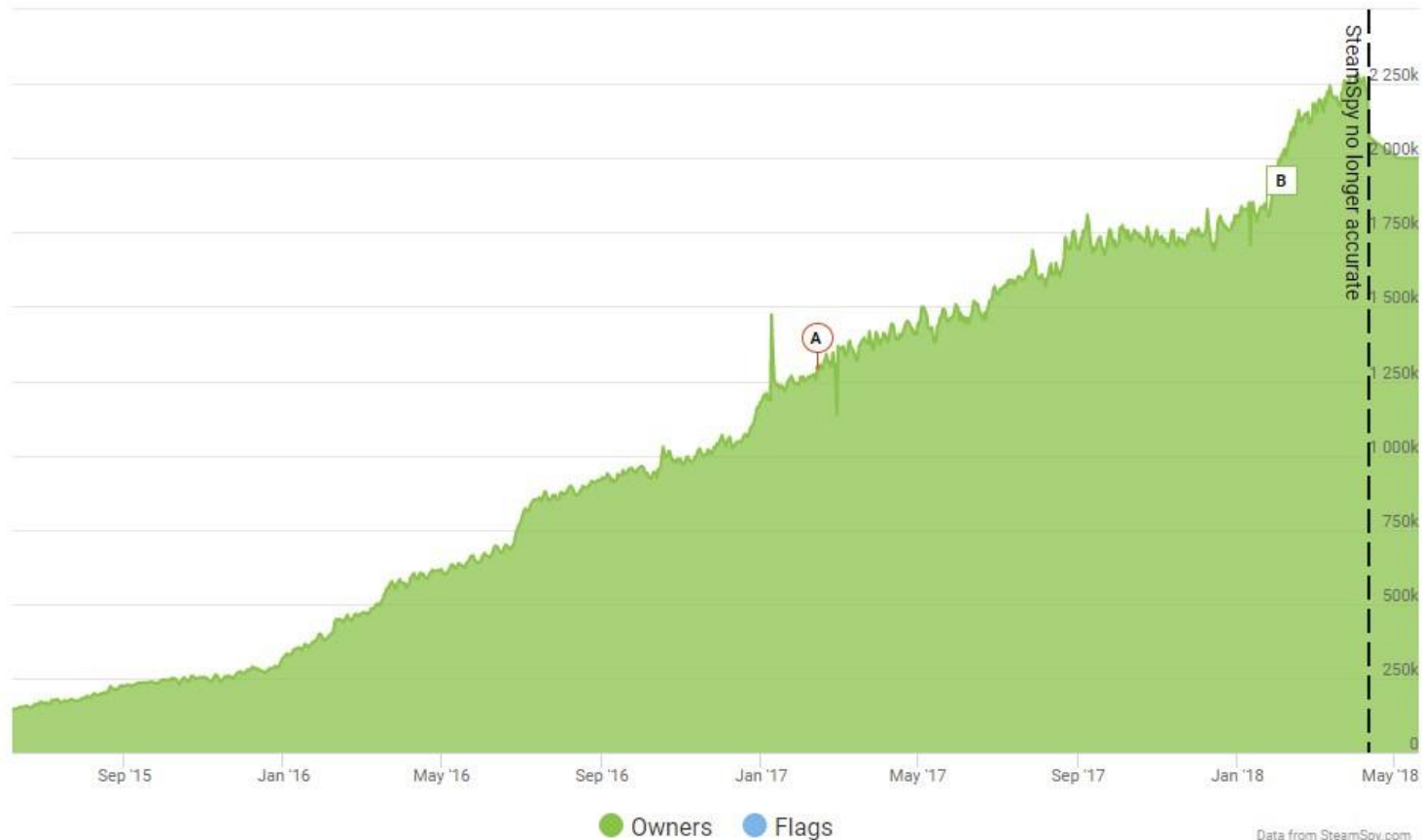
January 2018

\$25 USD



# SteamSpy Estimated Owners

Zoom 1w 1m 3m 6m 1y 3y all





# Players every day

[Compare with others...](#)

Zoom 1w 1m 3m 6m 1y **3y** all



● Players ● Flags — Twitch Viewers

SteamDB.info

Your Store ▾

Games ▾

Software ▾

Hardware ▾

Videos ▾

News

search the store



All Games &gt; Adventure Games &gt; Subnautica

# Subnautica

Community Hub



Descend into the depths of an alien underwater world filled with wonder and peril. Craft equipment, pilot submarines and out-smart wildlife to explore lush coral reefs, volcanoes, cave systems, and more - all

93% of the 69,730 user reviews for this game are positive.

RECENT REVIEWS: **Overwhelmingly Positive** (1,887)

ALL REVIEWS: **Very Positive** (69,730)

RELEASE DATE: 23 Jan, 2018

DEVELOPER: **Unknown Worlds Entertainment**

PUBLISHER: **Unknown Worlds Entertainment**



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# SUBNAUTICA PC

[Unknown Worlds Entertainment](#)[Release Date: Jan 23, 2018](#)[Also On: Xbox One](#)[Summary](#)[Critic Reviews](#)[User Reviews](#)[Details & Credits](#)[Trailers & Videos](#)

# 87

## Metascore

Generally favorable reviews  
based on **38 Critics**

[What's this?](#)

**Summary:** Descend into the depths of an alien underwater world filled with resources, creatures, wonder and threats. Craft equipment and submarines to explore lush coral reefs, volcanoes, cave systems, and more - All while attempting to survive.

# 8.2

## User Score

Generally favorable reviews  
based on **395 Ratings**

**Your Score**

**Developer:** Unknown Worlds Entertainment

**Genre(s):** Adventure, General

**# of players:** No Online Multiplayer

**Cheats:** [On GameFAQs](#)

**Rating:** E10+

**More Details and Credits »**

# Subnautica

PC & Mac

Xbox One

ARC

Steam

PS4

WeGame

January 2018

Oculus

Discord

\$25 USD

Epic

→ 2 million copies





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# Development

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# Plan

Small project

Unity

Casual / iPad

4 developers

6 months

# Reality

Big project

Unity

PC & Consoles

25 developers

5 years

→ \$10 million USD cost 🤖





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# Idea

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# Idea

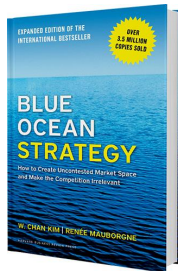
Blue Ocean Strategy

Underwater Minecraft

Survival sandbox

Science fiction

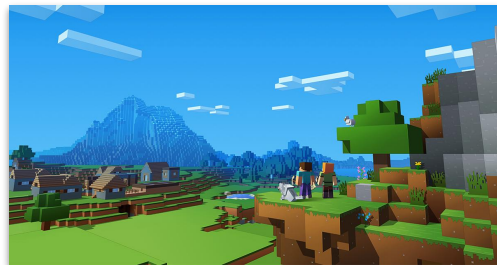
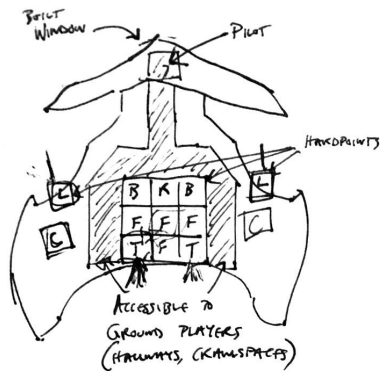
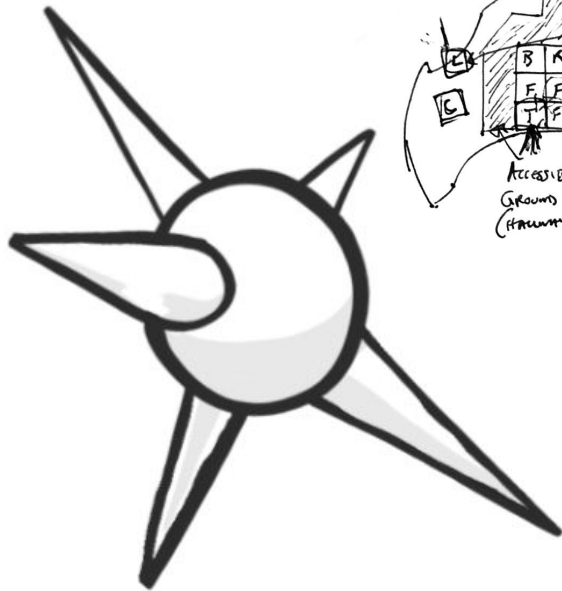
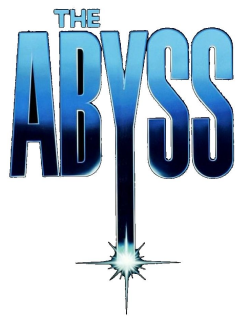
No guns!





Be Spiky  
→ Klei







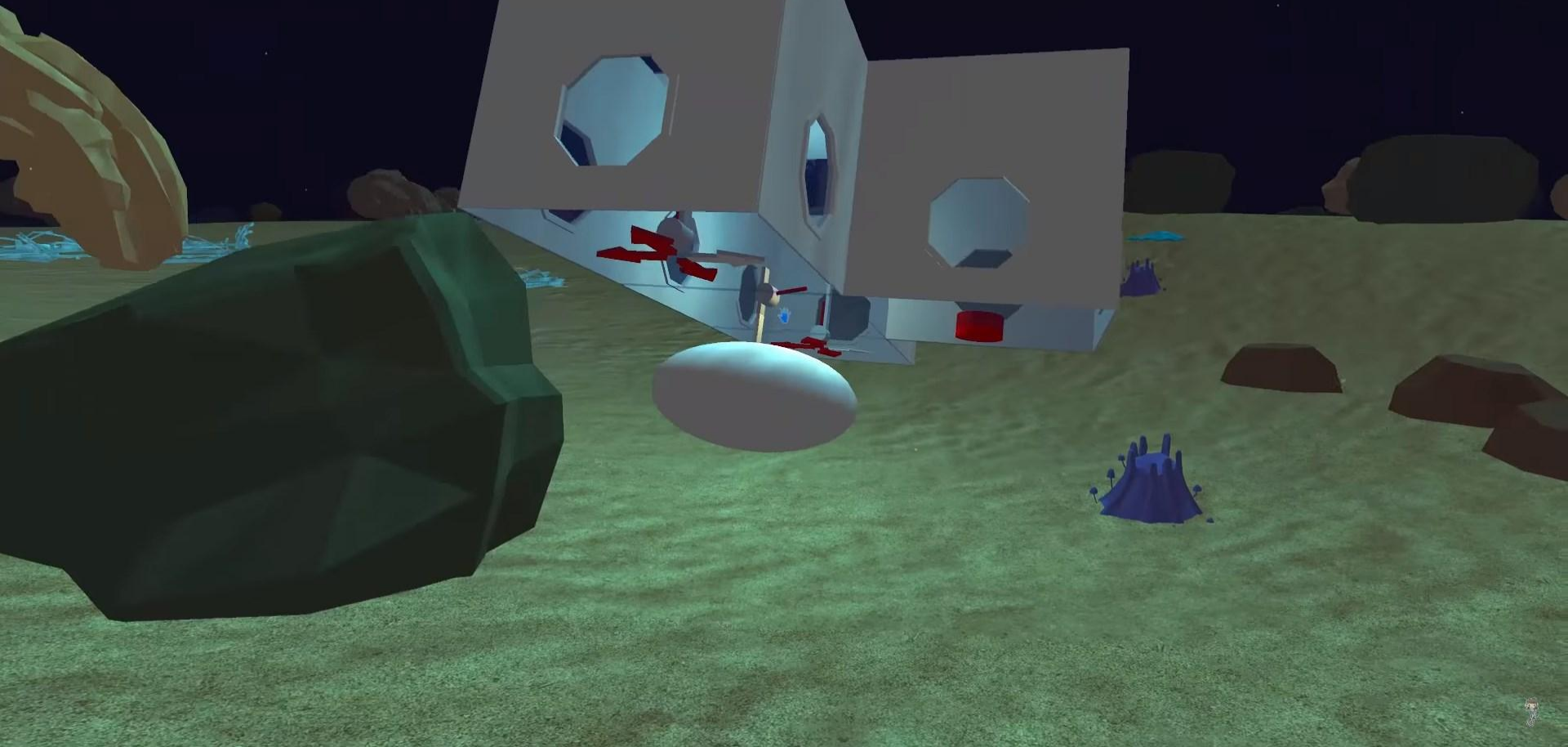


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# Prototypes

OXYGEN LEFT: 50.1 / 60.0

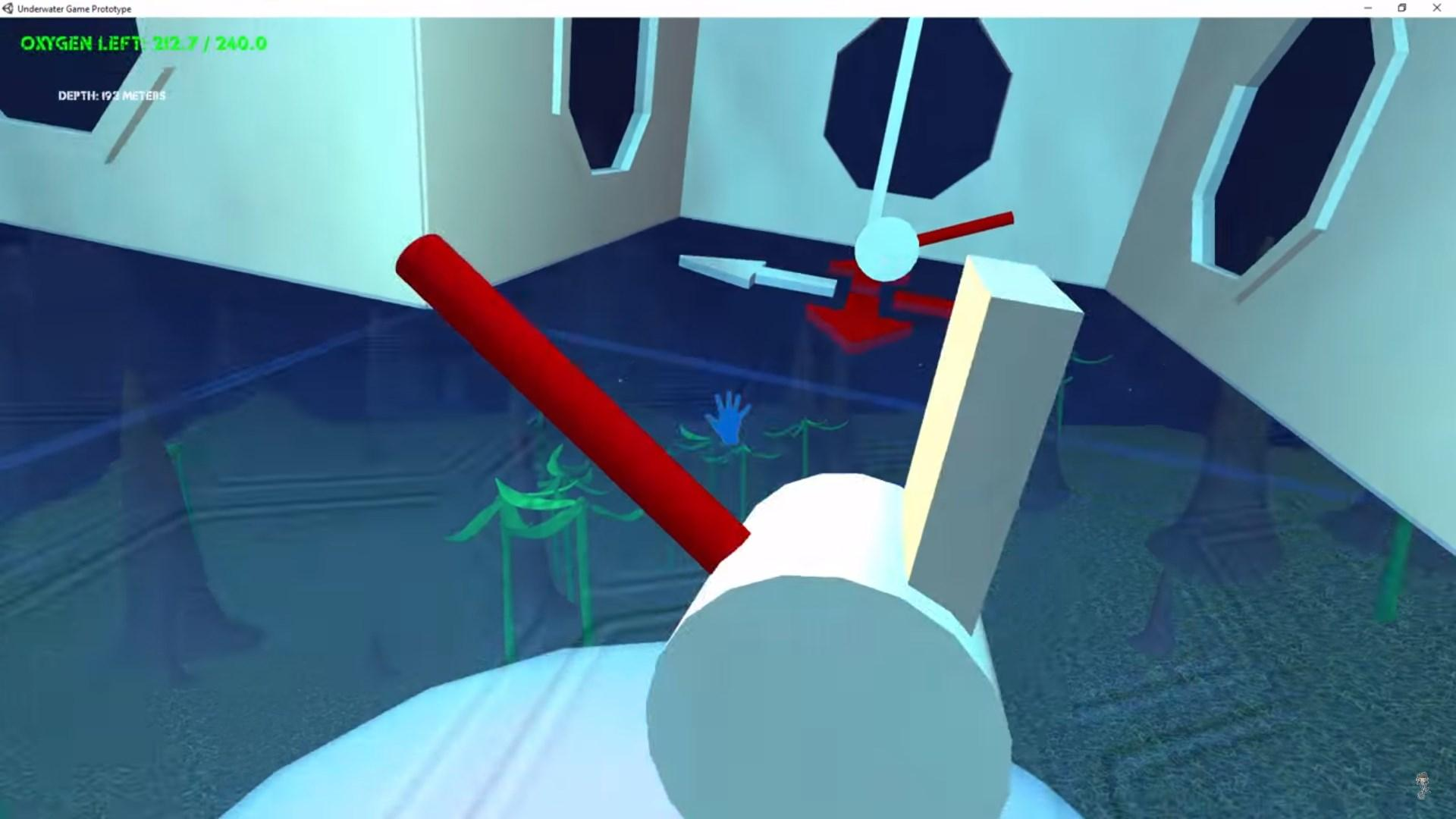
DEPTH: 46 METERS





OXYGEN LEFT: 212.7 / 240.0

DEPTH: 192 METERS



OXYGEN LEFT: 2:06 / 3:00

DEPTH: 56 FT  
SHIP DEPTH: 36 FT





**OXYGEN LEFT: 320.0 / 320.0**

DEPTH: 3 FT

SHIP DEPTH: 5 FT



x1



x0



## CRAFT TANK

Loot saved.

**MELDSTEEL TOTAL:**

+9

### BATHYSPHERE (COST 15)

**FIRST SUB (COST 25)**

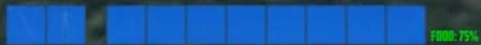
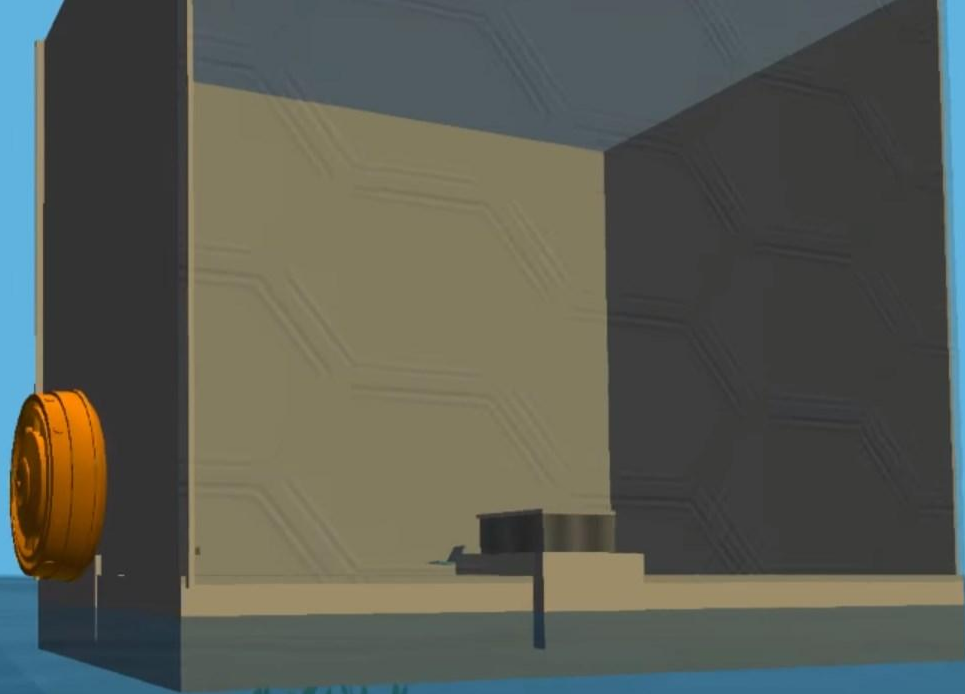


OXYGEN: 15 / 15 BAR

DEPTH: 0 FT

Enter "commands" in console for testing.

404 Not Found





# Good

Underwater

Open world

Oxygen management

Flooding

Tech progression

# Bad

Modular submarines

Modular controls

# Good

~~Underwater~~ Wonder & Fear

~~Open world~~ Discovery

~~Oxygen management~~ Tension

~~Flooding~~ Tension

~~Tech progression~~ Intrinsic Rewards

→ Feelings!

# Bad

Modular submarines

Modular controls

→ No feelings

A large, dark, textured sphere, possibly representing a planet or moon, is the central focus. It has a reddish-brown, cratered surface. The word "Emotions" is written in white, sans-serif font across its center. The background is a dramatic sky with a bright sun in the upper left, casting a glow. The sky is filled with dark, swirling clouds and numerous small stars. The bottom of the image shows a dark, rippling ocean surface.

Emotions



# The Design of Subnautica

Charlie Cleveland

Game Director



Wednesday, March 20th, 9:00 AM

Room 3016, West Hall



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Meanwhile...

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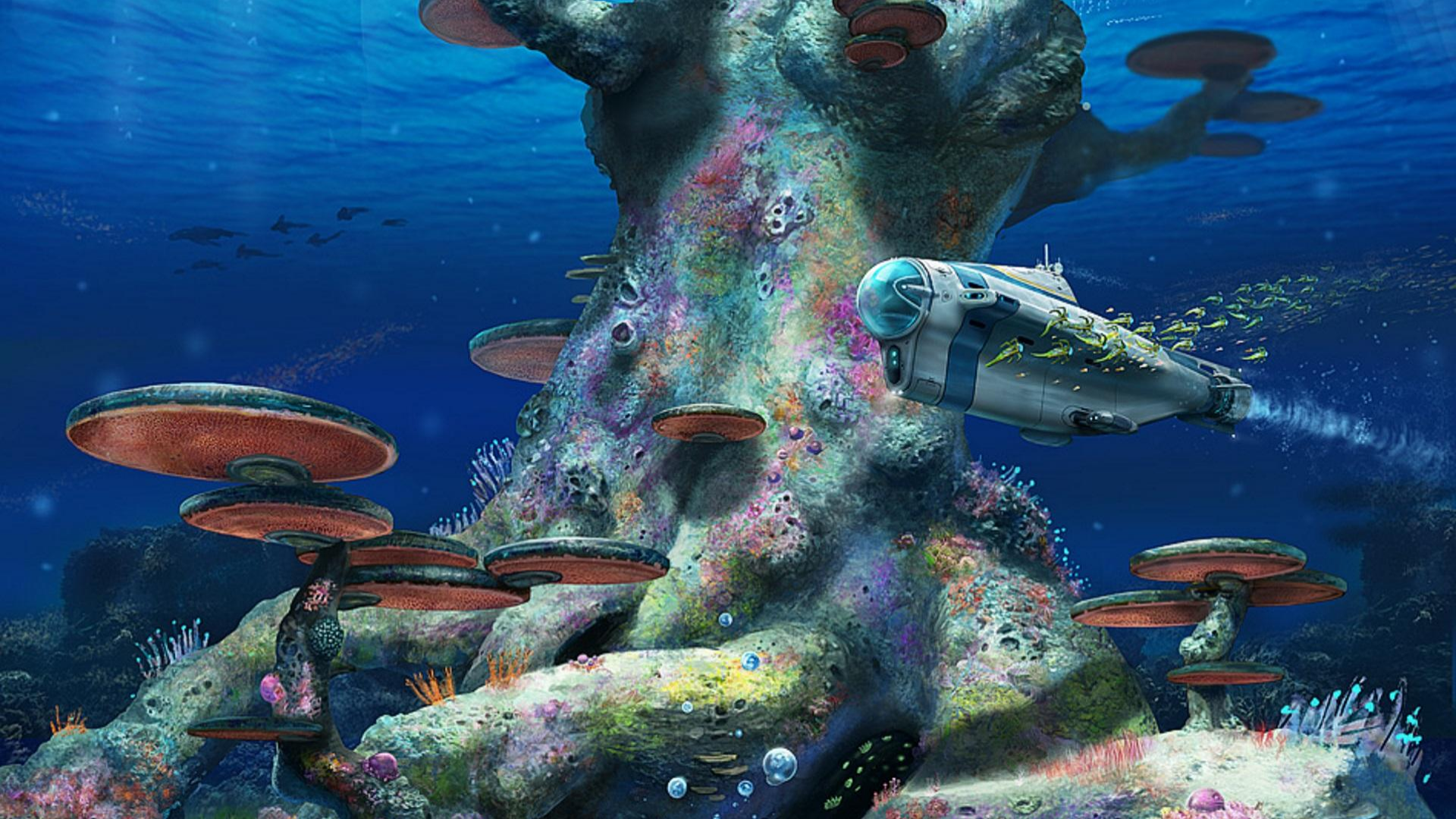




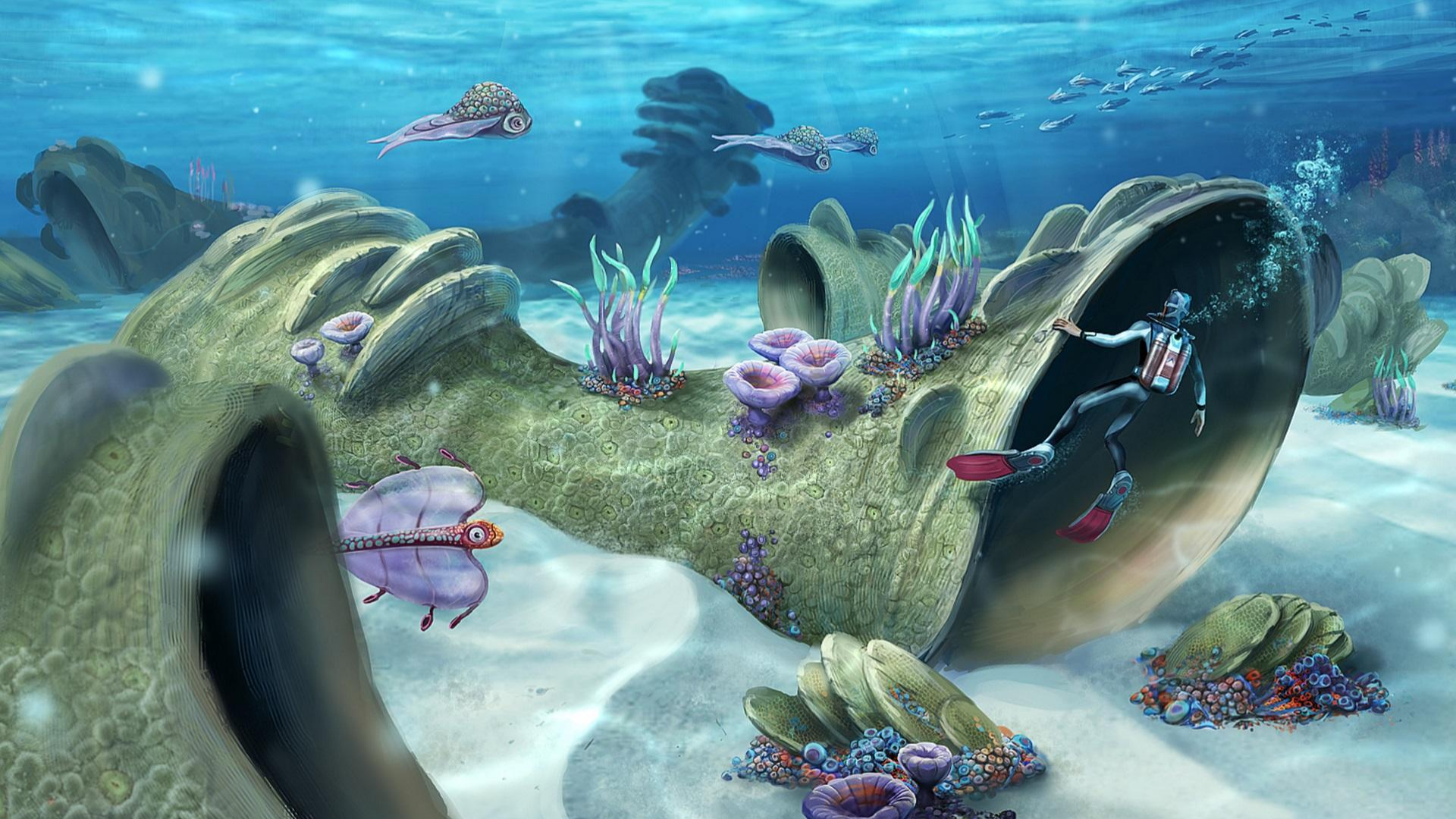














**SUBNAUTICA**  
PRE-ALPHA







# Feedback

Beautiful look

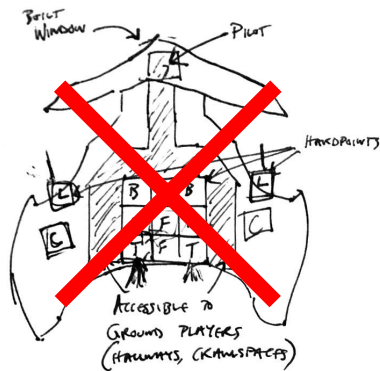
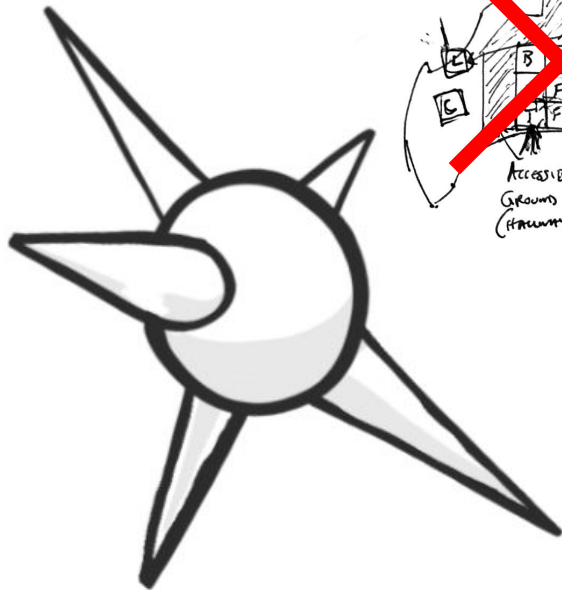
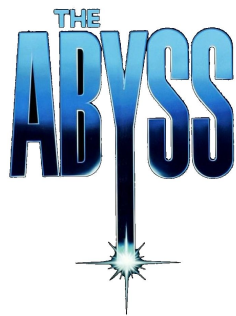
Thalassophobia

Bathophobia

→ Feelings

⚠ No gameplay!









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# Minimum Viable Product

# Minimum Viable Product

Priorities!

PC platform

Crafting

Single-player

Handcrafted world

Artists

Level designers

Editing tools

→ More developers

# Earliest Access

Some biomes

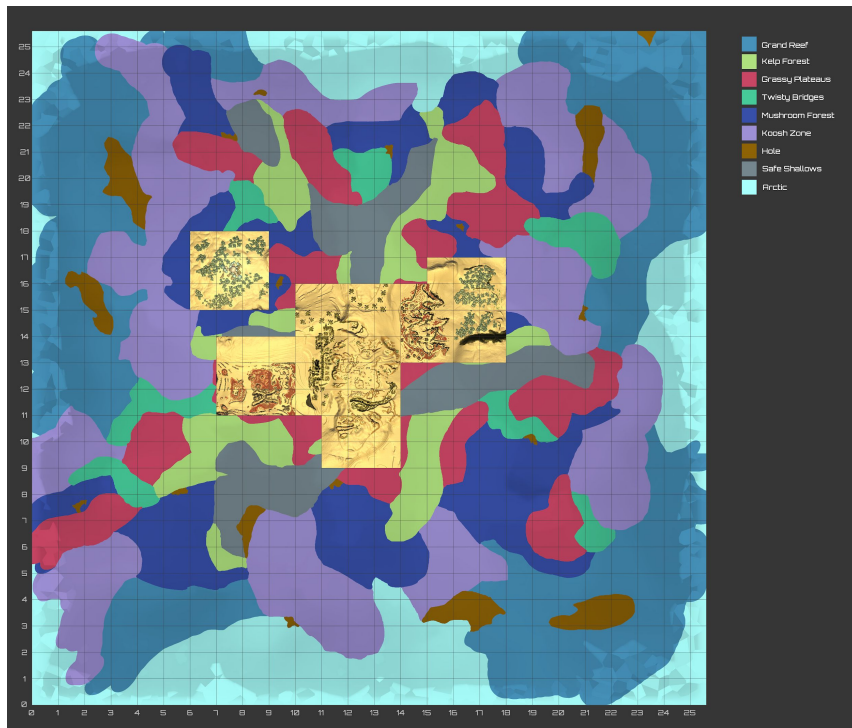
Some creatures

Some crafting

No submarines

→ “Earliest Access”

→ Telemetry & Feedback







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# Telemetry & Feedback

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DEPTH: 13 m

Early Development Build  
11832 Jan-15

☐ Invert Mouse

Mouse sensitivity : 15



Back to Game

Give Feedback

Save

Quit



O<sub>2</sub>

31 / 40

+

100%





## Feedback

30/190

Enter feedback here (Optional)

- ☐ General
- ☐ Gameplay
- ☐ Bug
- ☐ Framerate

☐ Include screenshot?



To submit, click one:







## News

## Feedback

## Top words

## Top bigrams

## Co-occurrence search

## Time Capsules

## Voting queue

## Moderation queue

## Active TCs

## Stats

## The Heat Dispenser

## Emails

## Users

## Roles

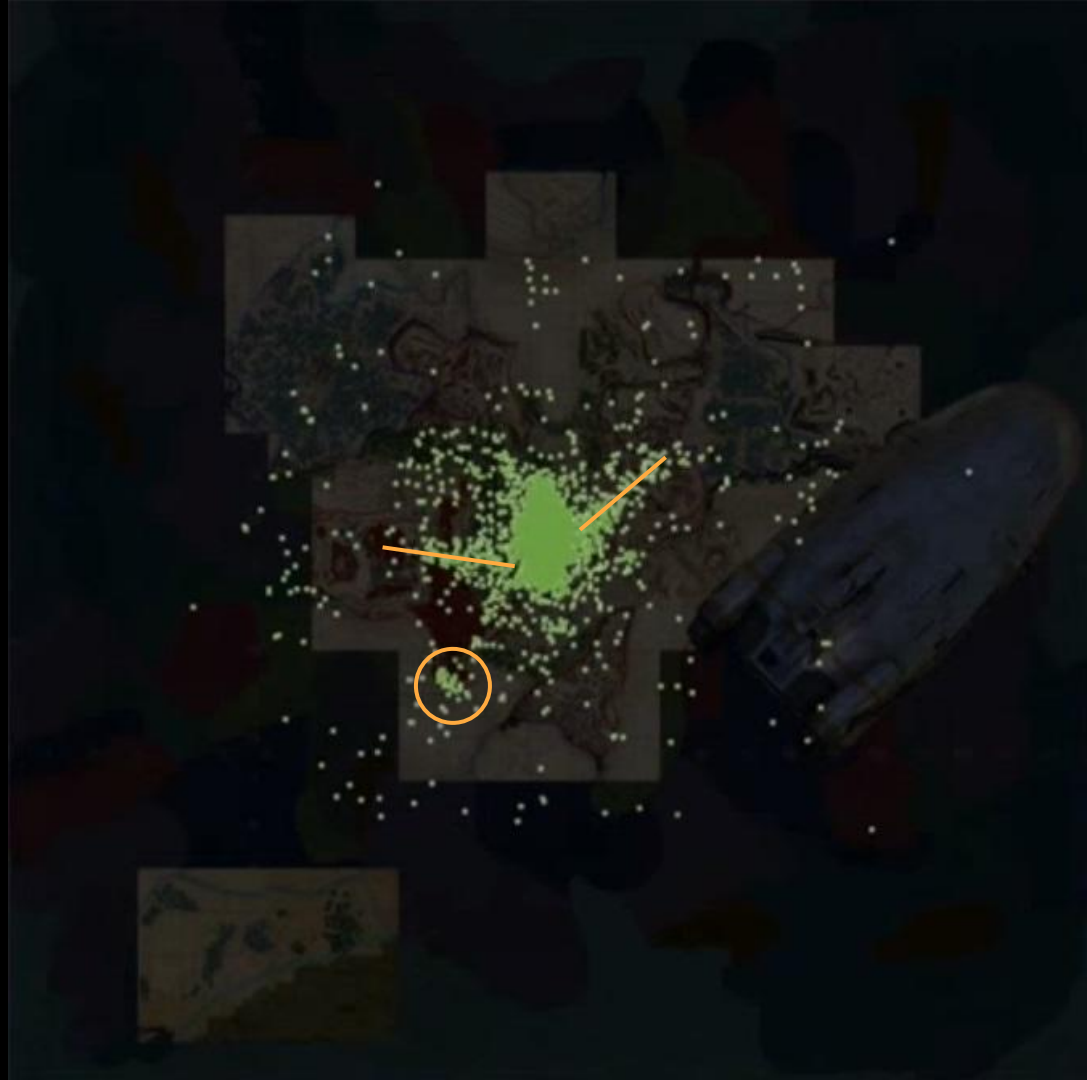
## Flush cache

## FEEDBACK TICKETS

#	Emotion	Description and additional info	Screenshot	Changeset	FPS	Date	Options
		while right at it: is there a way to disable scanner on seamoth? i really dont see benefit (just blocks my sight) - again, love your work!! keep going (or with next project anyway)		60072	43.61492	2018-08-05 13:09:01	<a href="#">Reply</a> <a href="#">Permalink</a>
				60072	15.98835	2018-08-05 13:06:42	<a href="#">Reply</a> <a href="#">Permalink</a>
				60072	0	2018-08-05 13:06:26	<a href="#">Reply</a> <a href="#">Permalink</a>
		i need help all the all the rescuse things they break		60072	52.29158	2018-08-05 13:06:09	<a href="#">Reply</a> <a href="#">Permalink</a>
				60072	0	2018-08-05 13:06:06	<a href="#">Reply</a> <a href="#">Permalink</a>
		Hi Again, why is it, that every item moves to container with right-click but modules and batteries/e-cells with left-click? i know, complaining on high level. I just wonder :) - love ur game		60072	25.20913	2018-08-05 13:06:00	<a href="#">Reply</a> <a href="#">Permalink</a>
		can't build scanner room attached to T- or X-Compartments. Nothing attached		60318	50.78026	2018-08-05 13:06:00	<a href="#">Reply</a> <a href="#">Permalink</a>

Very Happy   Happy   Unhappy   Angry









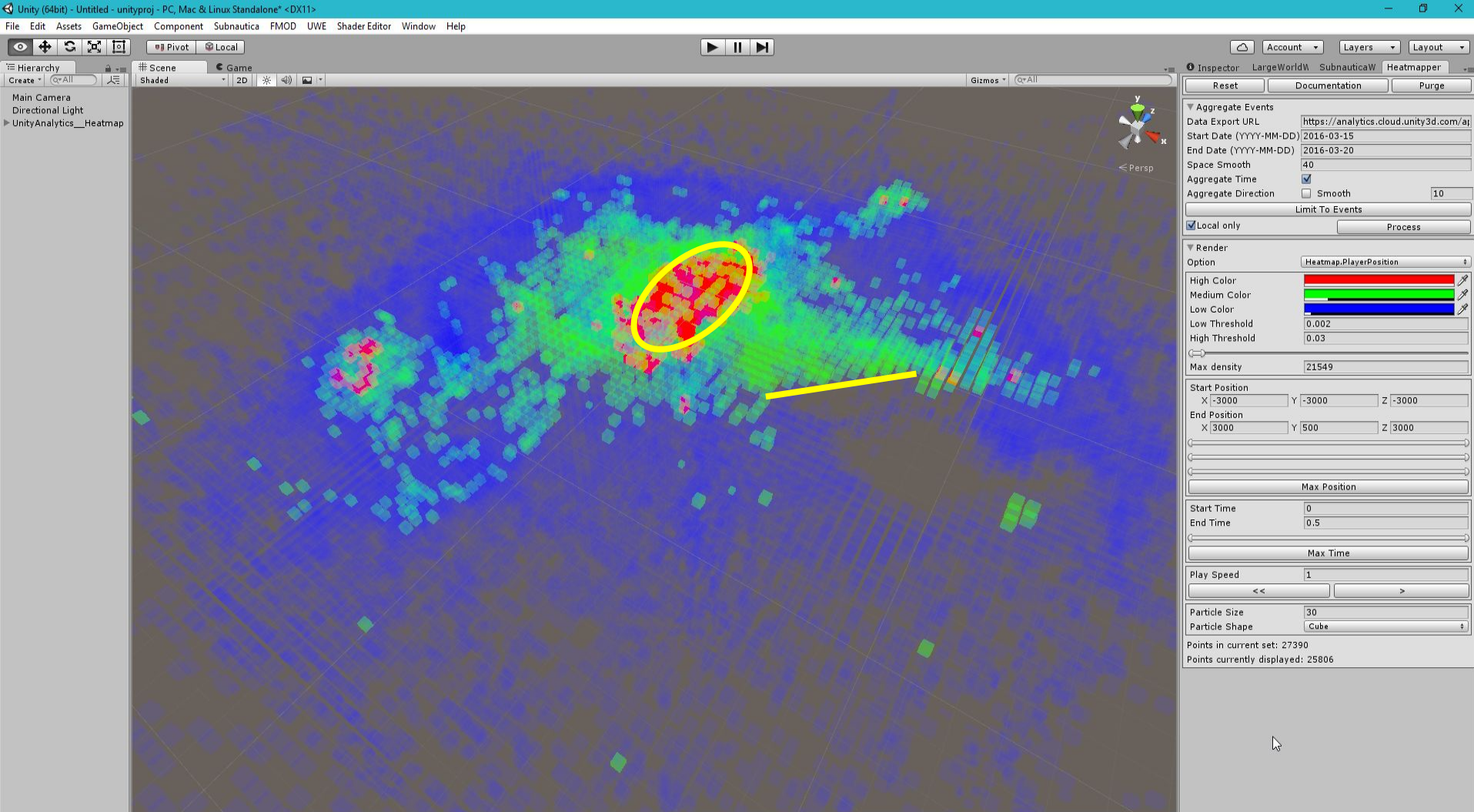
O<sub>2</sub>

DEPTH: 1 m



Early Development Build  
9418 Nov-14

YBR







O<sub>2</sub>

DEPTH: 4 m



Early Development Build  
9418 Nov-14

YBR



# Runway

Money ran out

→ Early Access



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# Early Access

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DEPTH: 43 m

O<sub>2</sub> 190 / 190  
+ 44%



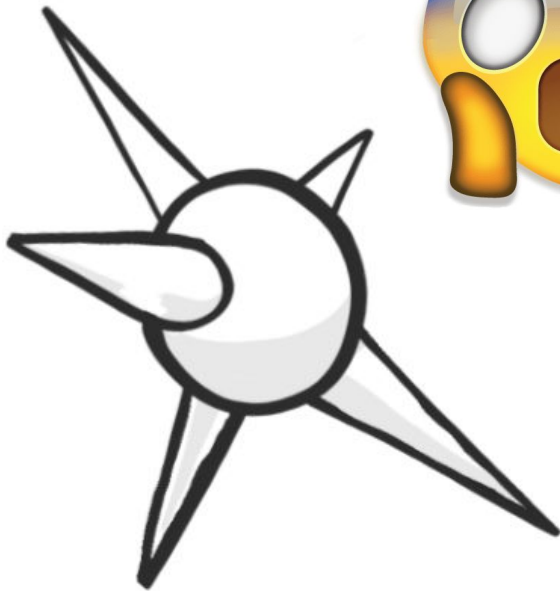


O<sub>2</sub>  
DEPTH: 65 m  
+44%

PRESS E TO EXIT (E)  
HEALTH: 22% ENERGY: 0%



THE  
ABYSS



# Learnings

Creatures terrify

Accidental horror

Underwhelming sales

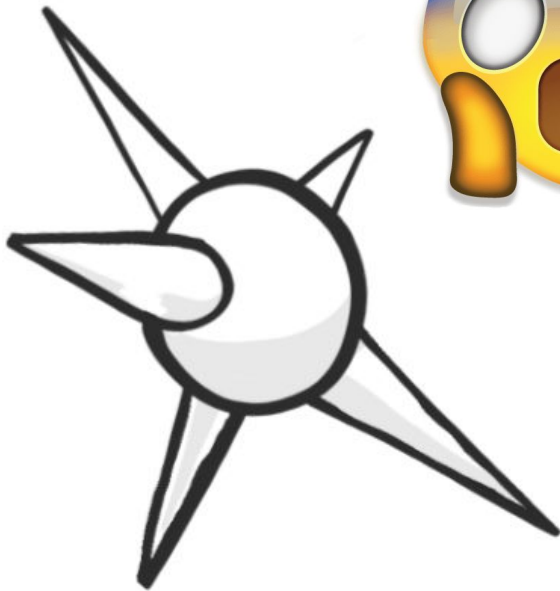
Barely enough revenue

→ Need impactful features

→ Priorities!



THE  
ABYSS



# Perseverance

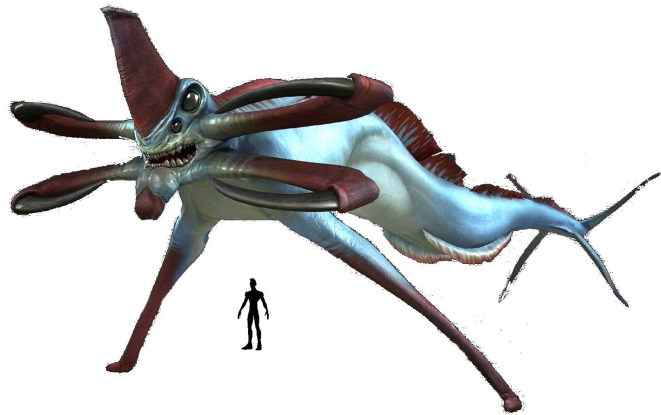
Monthly updates

More discovery

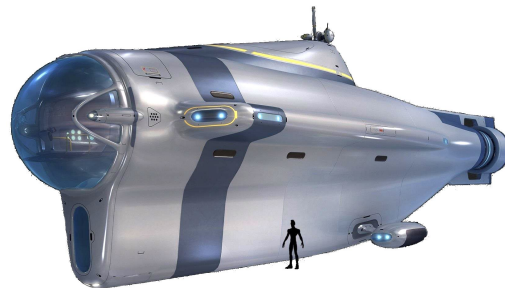
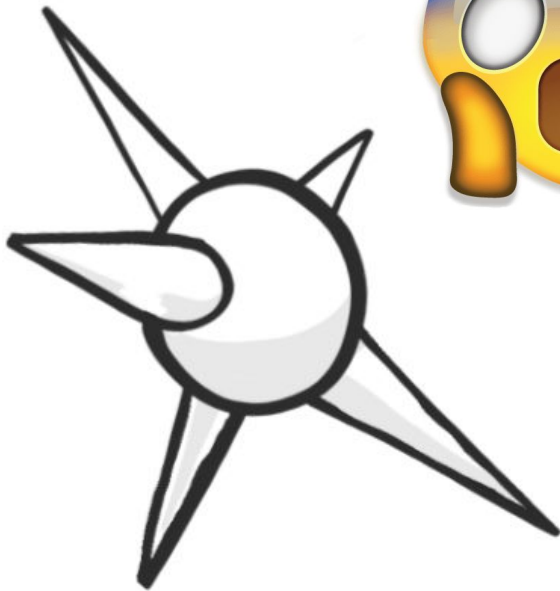
Themed updates

→ Cyclops

→ Reaper



THE  
ABYSS







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# Communication

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# SUBNAUTICA



## Cyclops Submarine Released

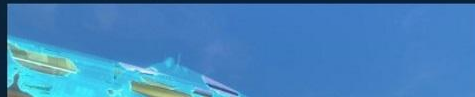
Posted by Hugh 4 years ago



A giant drive-able submarine featuring a submersible launch bay, dive chamber, and more is now available in Subnautica. Play with it now by purchasing Subnautica on Steam. The Cyclops is over 50 meters long, has multiple decks, and enables you to explore the ocean further and deeper than ever before.



Build a Cyclops submarine using the Constructor. Craft a Constructor at the Fabricator on your Lifepod, and then feed the required resources into the Constructor. The Cyclops will form above the water surface, before crashing down ready for you to board.



Subnautica Retweeted

Tom Jubert  
@TomJubert

Just casually testing @Subnautica Below Zero, spawning fish so I can write their bios for early access, then all of a sudden WTF IS THIS THING?! I think I can hear it gurgling 'Gill me'. It was so pretty when it was spinning. Love it.



Jan 16, 2019

Subnautica Retweeted

Andrew Jones  
@acwjones

Hope you like ickies. @Subnautica



Jan 10, 2019

Follow us on Twitter



## HOT TOPICS

Problem with graphics settings in save game restored from backup.

Do creatures in alien containment die without power?

Subnautica PS4 Update 1.06 Released - Subnautica

Sub Zero beta?

**Tweets**  
966**Following**  
23**Followers**  
51K**Likes**  
2,632**Lists**  
1[Follow](#)

## Subnautica

@Subnautica

Open world underwater adventure game built by @UWEDev. Media: [media@unknownworlds.com](mailto:media@unknownworlds.com) Support: [bit.ly/1TgWKP6](https://bit.ly/1TgWKP6) Xbox: @SubnauticaXbox

[store.steampowered.com/app/264710](https://store.steampowered.com/app/264710)

[Joined September 2013](#)

[Photos and videos](#)

**Tweets****Tweets & replies****Media**

Pinned Tweet



**Subnautica** @Subnautica · Jan 24

Dive into an underwater adventure filled with wonder and peril. @UWEDev presents, Subnautica: [unknownworlds.com/subnautica/rel...](https://unknownworlds.com/subnautica/rel...)



260

1.1K

3.4K

## New to Twitter?

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[Sign up](#)

**You may also like** · Refresh



**Unknown Worlds**  
@UWEDev



**Charlie Cleveland**  
@Flayra



**Subnautica Xbox One**  
@SubnauticaXbox



**Obraxis**  
@obaxis



✚ Compose

- 📧 Inbox
- 🕒 Snoozed
- 📌 Important
- 📤 Sent
- 📧 Drafts
- 📧 All Mail

## Subnautica Update: Alterra Science



**Unknown Worlds** hugh@unknownworlds.com [via mail221.atl171.mcdlv.net](#)  
to subnautica

Thu, May 28, 2015, 8:28 PM



Alterra Science: Subnautica Early Access update released!

[View this email in your browser](#)

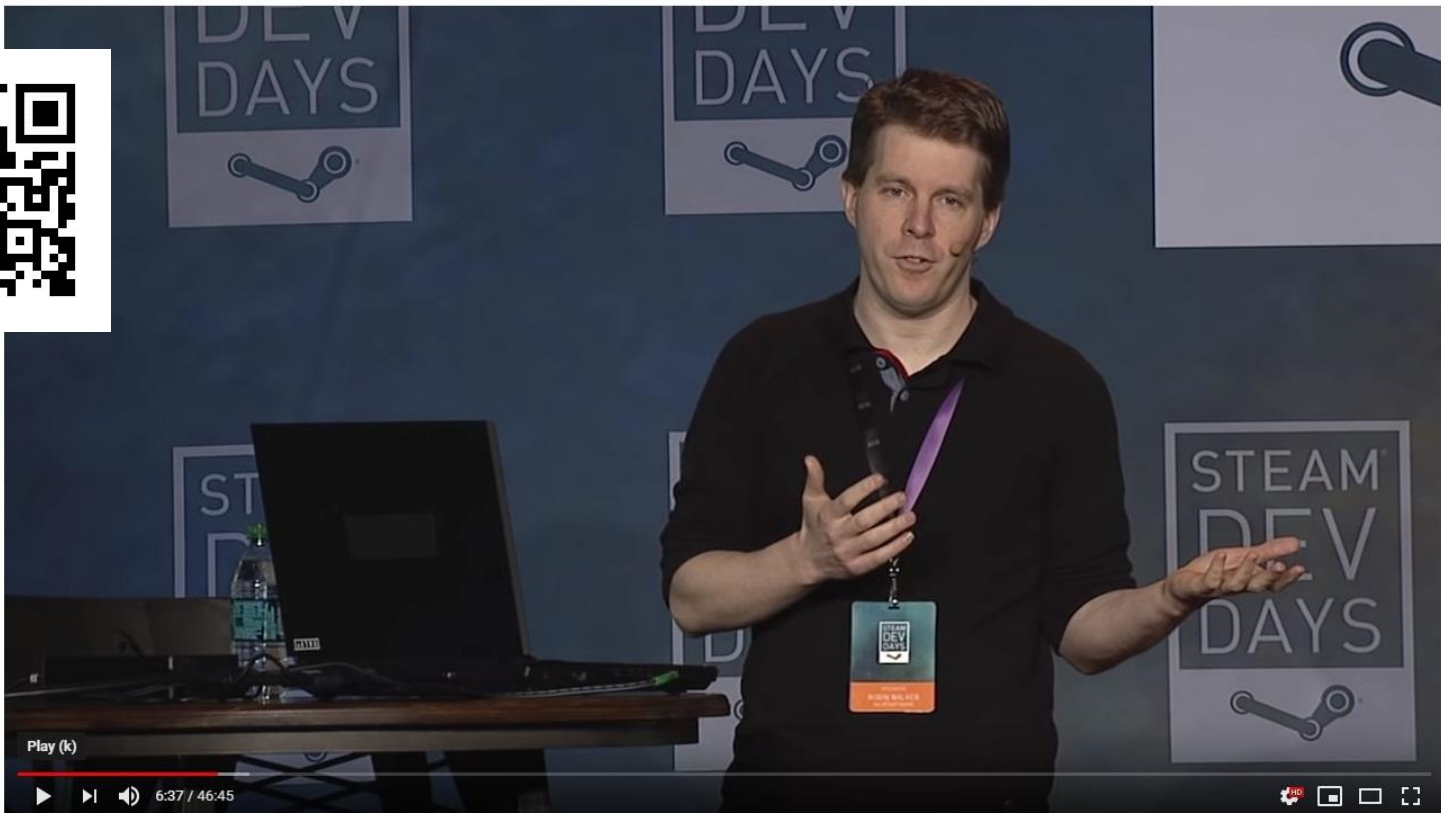


## Alterra Science Update

Customise equipment & Propel fish to unsafe velocities

Hello everyone!

SUBNAUTICA  
VOICE  
— OF THE —  
DEEP



## Community and Communication in Games-As-Services (Steam Dev Days 2014)

80,018 views

681 37 SHARE SAVE ...



Steamworks Development

Published on Feb 11, 2014

SUBSCRIBE 26K

Although there has been a robust discussion in our industry about how the transition to games-as-services affects the way we build products, we feel there hasn't been enough focus on how that



Subnautica features submarines. What happens when you drive a submarine into a rock, or a large alien life form gets a little too friendly? Watch this video to find out:



Sylvain has been hard at work creating these effects. This is a technical prototype, and not representative of the quality of the final game.

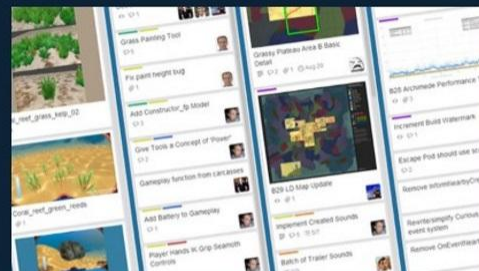
As the water level rises, there is less and less room to hide, and to breath. Perhaps if a submarine is not repaired fast enough, it will sink ... And all the hard work that has gone into customising it, all the equipment stored on board, and even your life could be lost...

[Read More...](#)



## Subnautica: Open Development

Posted by [Hugh](#) 4 years ago



Today we made our [internal task tracker](#), a [Trillobyte board](#), public. Anyone can now see what the Subnautica team is working on, in real time. You can see where we are delayed, where we are fast, our failures and successes. The board covers almost all of Subnautica development!

Not included are in-progress trailer renders (super serious secret stuff guys!), some story elements (also super secret!) and our 3D art production pipeline (housed in a separate tracker that can't be easily made public.)

Our builds usually run on a Monday to Friday timescale. On Mondays, we generally self-direct, analyse the previous build, and scope the week's work. On Friday evening, builds are made as we all run off for the weekend. ...

[Read More...](#)

Subnautica Development


Boards

Subnautica Development

Unknown WorldsFreePublic

CalendarShow Menu

Backlog



OUR BEST GUESS  
SUBJECT TO CHANGE

Development process

Optimise Kyanite textures.

Double techType list in scanner room

Seadragon Swim Anims

Seamoth while Swimming Enter / Exit

Hatching Enzyme Use Cinematic

Add a card...

To Do

Fix pop in issue at wreck 6

Adjust propulsion cannon fragment spawns for better coverage in early mid game.

Measure prefab vs static asset

B81 Upgrade script

Fix time capsule preflight check

Add autosave when entering lifepod/bases/ Cyclops

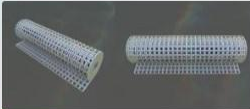
Fuzz input files

Clamp view distance based on quality settings

Crabsquid EMP effect on exosuit broken ?


Add a card...

Doing



Fiber\_Mesh

Ending/Credits Pre-Viz



Loot cube list

Improve tree cove lava zone tunnel for cyclops navigation

Better Cinematics for VR

Time capsules

Update Sky' spherical harmonics on import instead of OnInspector

Add a card...

Done B84: Maintenance

Turn subtitles off for VOs by default

Add Flooding back to Cyclops

Release B85(?)

Clear build folder before build

Add a card...

Done B83: Bugfixes

Launch Site Content & Graphics

Finish Grassy Plains polish

Increase batch rings for high quality

Check pool budget on CS 59420

Split oxygen warning

Fix meta files for Tom's PSDs

[MergeRequest] branch /main/shel-tweaksAndFixes2

Review updated fbx files for Louis (cs 59548)

Add a card...

Done B82: Bugfixes

Scaffold Launch Site

Remove old ugly Crash Zone Trench Boulders.

Finish texture polish of north east kelp zone.

Additional scans

Fix story and scan issues identified by Tom

Post Process effects


Fix cyclops and seamoth water splash FX

Release B81

Hook up achievements

Add a card...

Done B81: Bugfixes



JellyShroom cave entrance improvements

Fix NRE in FireExtinguisherHolder

Fix NRE in WaterParkCreature

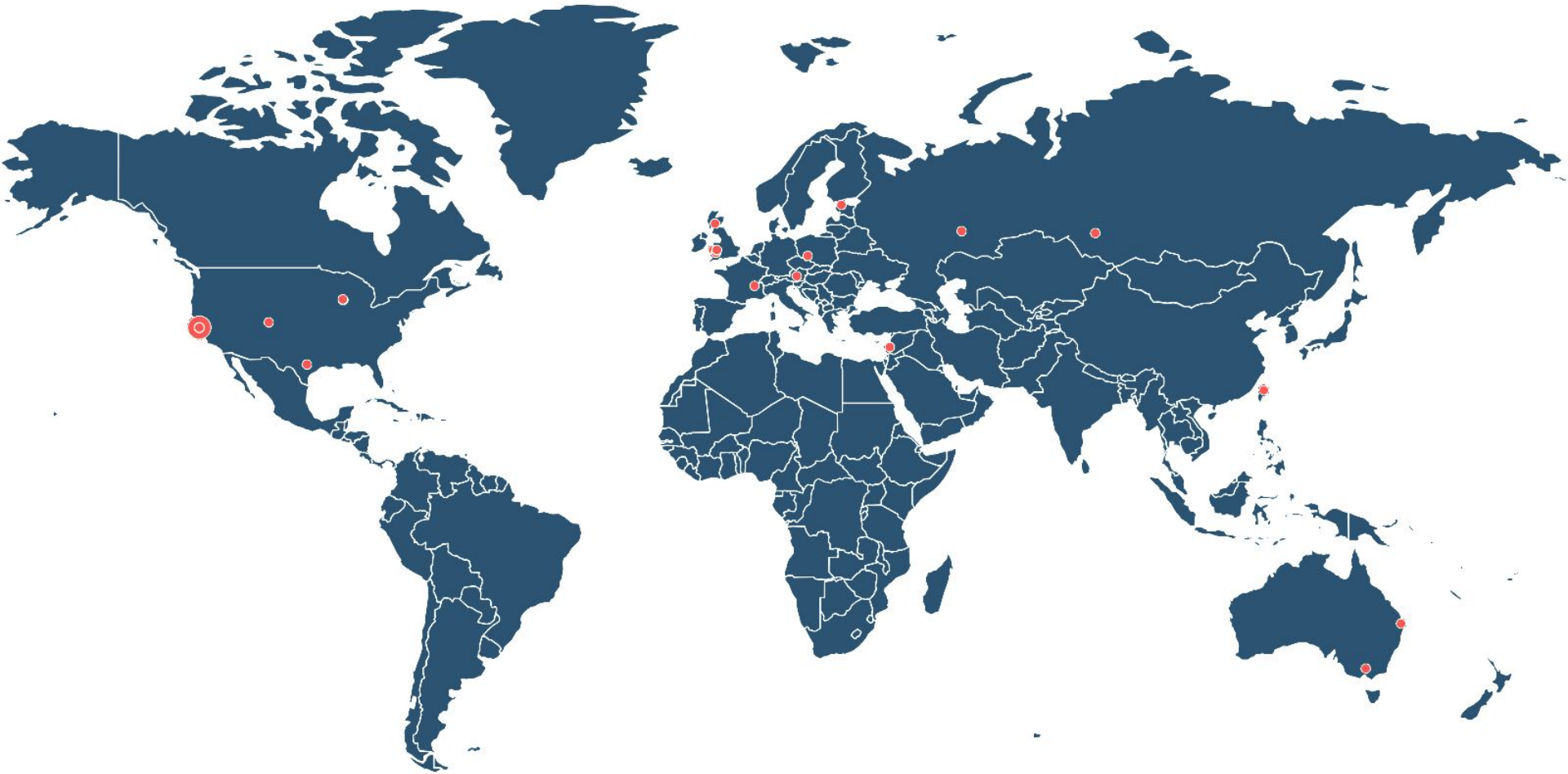
Blast off sequence VFX

Release B80 update.

Check thread safety for pools

Revisit workbench fragment spawn rate

Add a card...







Tweets 2,998 Following 2 Followers 3,294

Follow

## Subnautica Changes

@SubnauticaSCM






Live @Subnautica source code changes.  
Info: [steamcommunity.com/sharedfiles/fi...](https://steamcommunity.com/sharedfiles/filedetails/?id=1111111)

Earth

[store.steampowered.com/app/264710](https://store.steampowered.com/app/264710)

Joined January 2017

### Tweets Tweets & replies

- 
**Subnautica Changes** @SubnauticaSCM · Jun 11  
 CS#60163 by @Inowaczek: Merge to main procedure - workaround to display real owner of created changeset  
 1 2 9
- 
**Subnautica Changes** @SubnauticaSCM · Jun 11  
 CS#60161 by Build machine: Merge to main procedure fix  
 7
- 
**Subnautica Changes** @SubnauticaSCM · Jun 8  
 CS#60156 by Build machine: Multiline checkin  
 9
- 
**Subnautica Changes** @SubnauticaSCM · May 29  
 CS#60126 by Build machine: Always read logs to Jenkins, even if build fails  
 20
- 
**Subnautica Changes** @SubnauticaSCM · May 29  
 CS#60124 by Build machine: Always read logs to Jenkins, even if build fails  
 15

### New to Twitter?

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### Worldwide trends

Lombok

24.1K Tweets

#高校野球総選挙

28.1K Tweets

#الهلال\_أكبر\_من\_عموري\_واي\_لاعب

9,446 Tweets

#تعريده\_لشخص\_عزيز

21.8K Tweets

Barry Chuckle

104K Tweets

#FelizDomingo

15.3K Tweets

Steamworks &gt; App Admin &gt; Subnautica

## App Data Admin: Subnautica (264710)

Application ▾

SteamPipe ▾

Installation ▾

DRM

Stats &amp; Achievements ▾

Community ▾

Workshop ▾

Misc ▾

Publish

### Your Builds

[View SteamPipe Documentation](#)

Note that once you create a build branch, you will still need to make sure that any depots in that build are also in the appropriate packages. If you are testing yourself, you will need to make sure that any depots in the build are also included in your "developer comp" package, which should be the red-colored package in the [list of packages](#) for this application.

Keep in mind that all branch names and descriptions are visible to public, if the app is released.

13 available app branches :

Branch	Description	Password	BuildID		
experimental	Automatic daily updates. Lots of bugs!		3487404	Disable	Update
default	Public default branch		3169139		

[Create new app branch](#)

**Beta :** Upload depots as ZIP directly without using steamcmd (256MB max). [Click here](#)

&lt;&lt; Showing builds 5500 to 5550: \$ &gt;&gt;

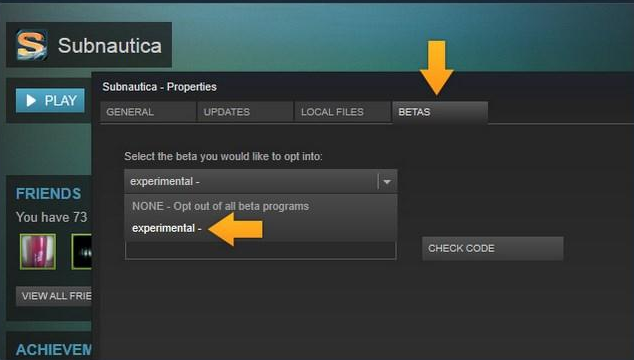
Current	BuildID	Date	Description	Depots Included	Set build live on branch...
	<a href="#">481495</a>	Dec 24, 2014 @ 2:09pm	Subnautica	<a href="#">264712</a> <a href="#">264713</a>	<a href="#">-- Select an app branch --</a> <a href="#">Preview Change</a>
	<a href="#">481436</a>	Dec 24, 2014 @ 9:59am	Subnautica	<a href="#">264712</a> <a href="#">264713</a>	<a href="#">-- Select an app branch --</a> <a href="#">Preview Change</a>
	<a href="#">481165</a>	Dec 23, 2014 @ 6:09pm	Subnautica	<a href="#">264712</a> <a href="#">264713</a>	<a href="#">-- Select an app branch --</a> <a href="#">Preview Change</a>
	<a href="#">481045</a>	Dec 23, 2014 @ 2:09pm	Subnautica	<a href="#">264712</a> <a href="#">264713</a>	<a href="#">-- Select an app branch --</a> <a href="#">Preview Change</a>
	<a href="#">480914</a>	Dec 23, 2014 @ 9:59am	Subnautica	<a href="#">264712</a> <a href="#">264713</a>	<a href="#">-- Select an app branch --</a> <a href="#">Preview Change</a>
	<a href="#">480504</a>	Dec 22, 2014 @ 6:09pm	Subnautica	<a href="#">264712</a> <a href="#">264713</a>	<a href="#">-- Select an app branch --</a> <a href="#">Preview Change</a>
	<a href="#">480488</a>	Dec 22, 2014 @ 5:15pm	Subnautica	<a href="#">264712</a> <a href="#">264713</a>	<a href="#">-- Select an app branch --</a> <a href="#">Preview Change</a>
	<a href="#">480484</a>	Dec 22, 2014 @ 5:06pm	Subnautica	<a href="#">264712</a> <a href="#">264713</a>	<a href="#">-- Select an app branch --</a> <a href="#">Preview Change</a>
	<a href="#">480477</a>	Dec 22, 2014 @ 4:55pm	Subnautica	<a href="#">264712</a> <a href="#">264713</a>	<a href="#">-- Select an app branch --</a> <a href="#">Preview Change</a>
	<a href="#">480469</a>	Dec 22, 2014 @ 4:30pm	Subnautica	<a href="#">264712</a> <a href="#">264713</a>	<a href="#">-- Select an app branch --</a> <a href="#">Preview Change</a>
	<a href="#">480452</a>	Dec 22, 2014 @ 3:55pm	Subnautica	<a href="#">264712</a> <a href="#">264713</a>	<a href="#">-- Select an app branch --</a> <a href="#">Preview Change</a>
	<a href="#">480356</a>	Dec 22, 2014 @ 2:09pm	Subnautica	<a href="#">264712</a> <a href="#">264713</a>	<a href="#">-- Select an app branch --</a> <a href="#">Preview Change</a>
	<a href="#">480215</a>	Dec 22, 2014 @ 9:59am	Subnautica	<a href="#">264712</a> <a href="#">264713</a>	<a href="#">-- Select an app branch --</a> <a href="#">Preview Change</a>
	<a href="#">480200</a>	Dec 22, 2014 @ 9:00am	Subnautica	<a href="#">264712</a> <a href="#">264713</a>	<a href="#">-- Select an app branch --</a> <a href="#">Preview Change</a>

**Warning:**Experimental updates will sometimes make Subnautica unplayable, and often include horrible bugs! Use caution when deciding to play on Experimental branch!

To get Experimental updates twice per day, right click on Subnautica in your Steam Library and click 'properties.'



Click on the 'betas' tab, and then select 'experimental' from the drop down list. If you can't click on the list, try restarting Steam or leaving the tab open for a little bit - It can sometimes take a little while to load options.



Sometimes, Experimental branch gets a little bit messy. Actually, it often gets a little bit completely broken and unplayable. If you ever want to go back to normal weekly updates, go back to the 'betas' tab and select 'none' from the drop down list.

GUIDE INDEX

Overview

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Dev Team Tasks

Changes & Checkins

Mailing List

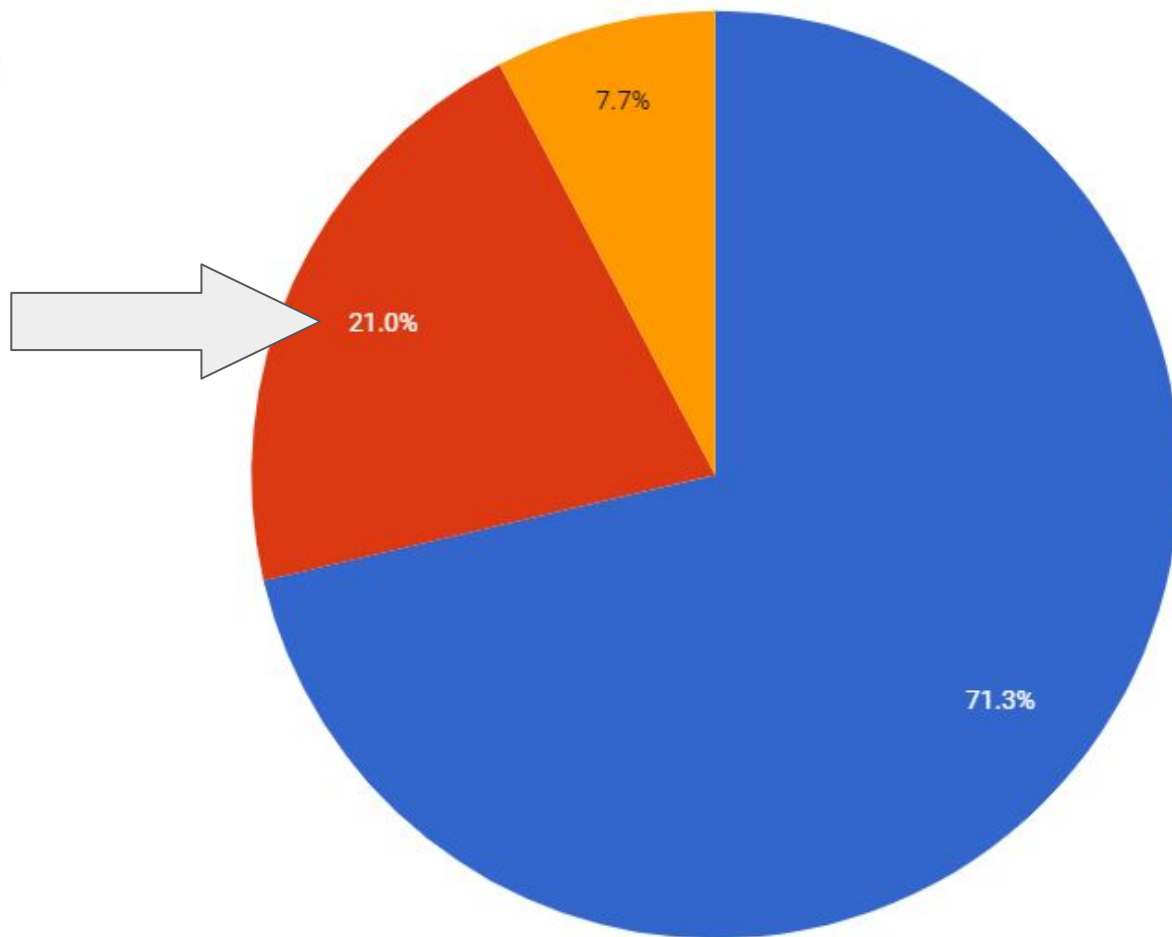
Bugs

Conclusion

Comments



- Stable
- Experimental
- Outdated





INDEPENDENT GAMES  
SUMMIT

# Traction

GDC

GAME DEVELOPERS CONFERENCE

MARCH 18–22, 2019 | #GDC19







## My Worst Fear Realized | Subnautica

758,971 views

👍 6.5K

💬 373

➦ SHARE

≡

...



Diction

Published on Dec 18, 2014

SUBSCRIBE 652K



## OCEAN SURVIVAL! - Subnautica - Ep.1

1,907,904 views

50K

618

SHARE



FRANKIEonPC

Published on Mar 6, 2015

SUBSCRIBE 3.5M



DAMN NATURE YOU SCARY! | Subnautica #1

8,993,656 views

165K

1.5K

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+

...



jacksepticeye

Published on Apr 2, 2015

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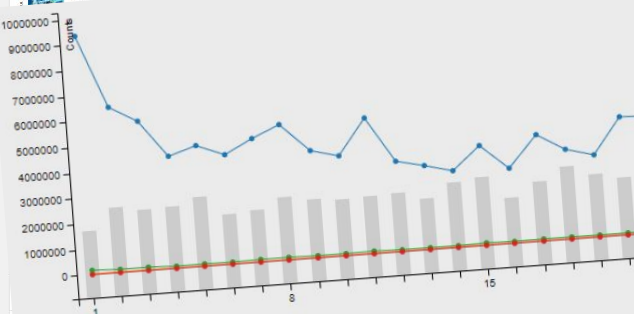
jacksepticeye

Home Videos Playlists Community Channels About

**Subnautica**  
jacksepticeye · 13 videos · 27,173,627 views · Last updated on Feb 5, 2018

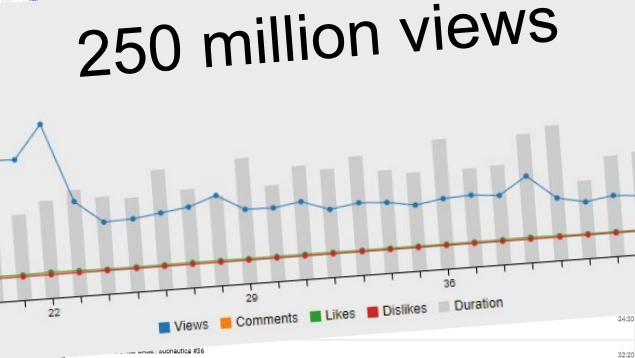
▶ Play all ◀ Show ↗ Save

- 1 DAMN NATURE YOU SCARY! | Subnautica #1 16:46
- 2 WHAT THE PHYLARISTHOSE? | Subnautica #2 22:08
- 3 DEEP SEA DIVING | Subnautica #3 21:11
- 4 SEAMOTH ADVENTURES | Subnautica #4
- 5 BIG BOSS RARE



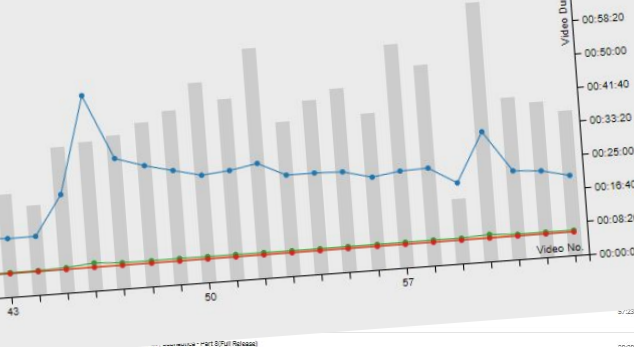
- 6 THE LOST RIVER | Subnautica #5 22:08
- 7 UNDERWATER APARTMENTS | Subnautica #6 22:54
- 8 SOLAR POWERED BASE | Subnautica #7 17:23
- 9 UNDERWATER APARTMENTS | Subnautica #8 20:38
- 10 THE MOON POOL | Subnautica #9 24:00
- 11 UNDERWATER BOYSCORAPERS | Subnautica #10 21:29
- 12 DONT FEAR THE REAPER | Subnautica #11 20:21
- 13 CREEPY UNDERWATER LOCATIONS | Subnautica #12 21:16
- 14 SUBRASSIC PARK | Subnautica #13 24:14
- 15 ITS GOOD TO BE BACK! | Subnautica #14 26:30

- 16 UNDERWATER APARTMENTS | Subnautica #17
- 17 THE MOON POOL | Subnautica #18
- 18 UNDERWATER BOYSCORAPERS | Subnautica #19
- 19 DONT FEAR THE REAPER | Subnautica #20
- 20 CREEPY UNDERWATER LOCATIONS | Subnautica #21
- 21 SUBRASSIC PARK | Subnautica #22
- 22 ITS GOOD TO BE BACK! | Subnautica #23
- 23 RESCUE ME! | Subnautica #24
- 24 SALLY'S BACK! | Subnautica #25
- 25 THE SECRET PRECURSOR RARE



- 26 THE LOST RIVER | Subnautica #27
- 27 JUMPING INTO THE VOID | Subnautica #28
- 28 THE SEA DRAGON LEVIATHAN | Subnautica #29
- 29 THE PRIMARY CONTAINMENT FACILITY | Subnautica #30
- 30 MOVING IS HARD | Subnautica #31
- 31 THE POWER OF SCIENCE | Subnautica #32
- 32 SWEET GLORIOUS H2O | Subnautica #33
- 33 THE SELF SUSTAINED MAN | Subnautica #34
- 34 SEA EMPEROR FINALLY IN THE GAME | Subnautica #35

- 35 SECRET ABANDONED BASE | Subnautica #36
- 36 THE LOST RIVER | Subnautica #37
- 37 JUMPING INTO THE VOID | Subnautica #38
- 38 THE SEA DRAGON LEVIATHAN | Subnautica #39
- 39 THE PRIMARY CONTAINMENT FACILITY | Subnautica #40
- 40 MOVING IS HARD | Subnautica #41
- 41 THE POWER OF SCIENCE | Subnautica #42
- 42 SWEET GLORIOUS H2O | Subnautica #43



- 44 HOW FAR CAN WE GO? | Subnautica - Part 10 (Full Release)
- 45 SOMETHINGS WRONG WITH ME | Subnautica - Part 11 (Full Release)
- 46 THE DEEPEST BASE | Subnautica - Part 12 (Full Release)
- 47 SCARED OUT OF MY MIND | Subnautica - Part 13 (Full Release)
- 48 I CURED THE DISEASE | Subnautica - Part 14 (Full Release)
- 49 BUILDING THE ROCKET | Subnautica - Part 15 (Full Release)
- 50 LEAVING THE PLANET | Subnautica - Part 16 END (Full Release)
- 51 THE DEAD ZONE IS TERRIFYING | Subnautica - Part 18 (Full Release)
- 52 THE BEST CREATURE IN SUBNAUTICA | Subnautica - Part 19 (Full Release)
- 53 OPERATION: GIANT AQUARIUM | Subnautica - Part 20 (Full Release)

250 million views



DEPTH: 0m

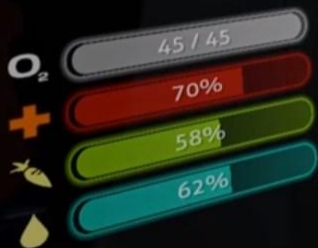
???



Multipurpose room

Basic room (-1.25HP)

Titanium x6 (6)





# Runway

Money ran out

→ ~~Early Access~~

→ Infinite money



# Production

# Roadmap

Leverage existing systems

e.g. Base building = Safety

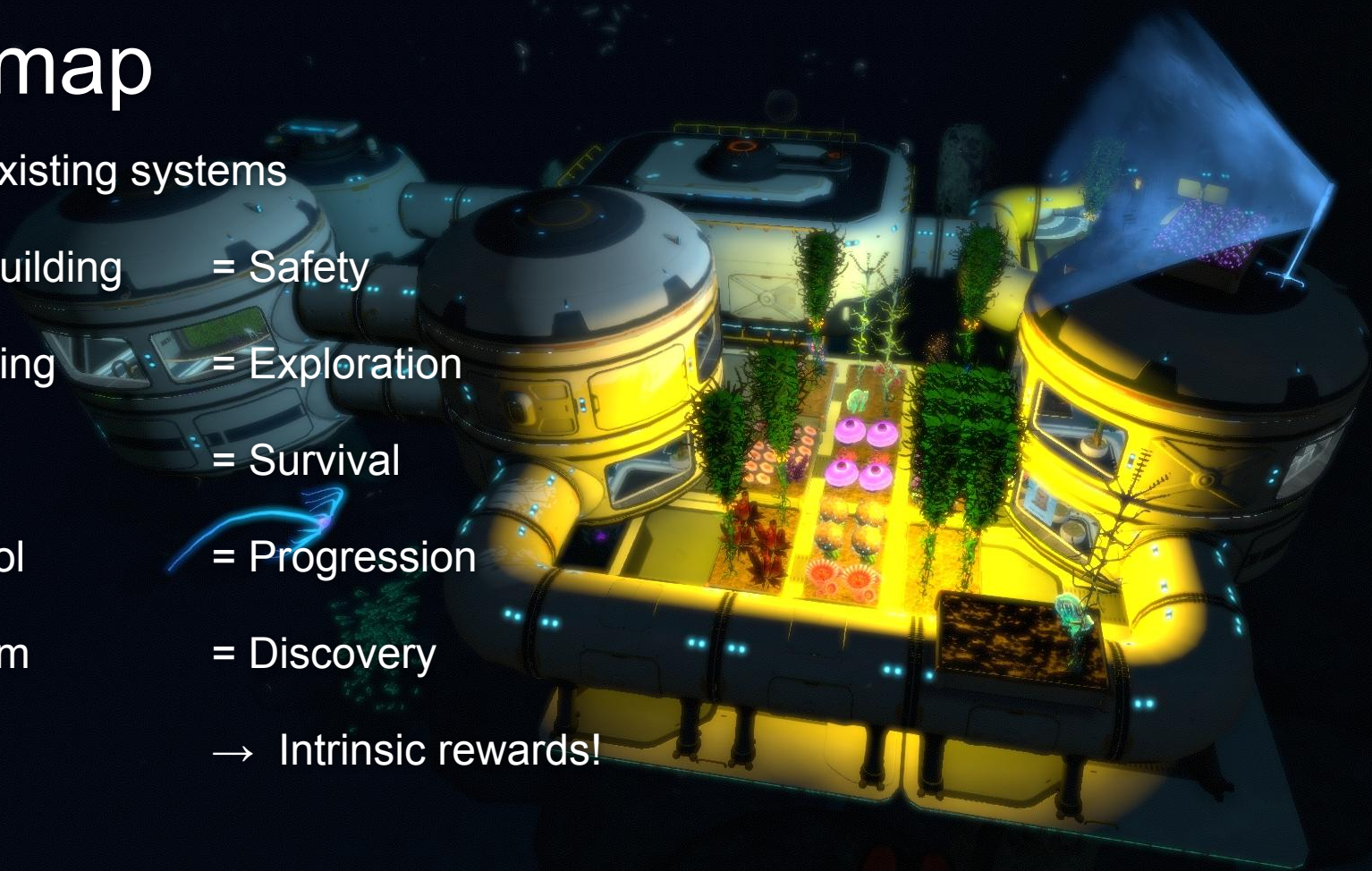
→ Trailblazing = Exploration

→ Farming = Survival

→ Moonpool = Progression

→ Map room = Discovery

→ Intrinsic rewards!







4 m  
E SE

4 %  
I compartment  
Construct (C) Deconstruct (Q)  
Titanium

O<sub>2</sub>  
54

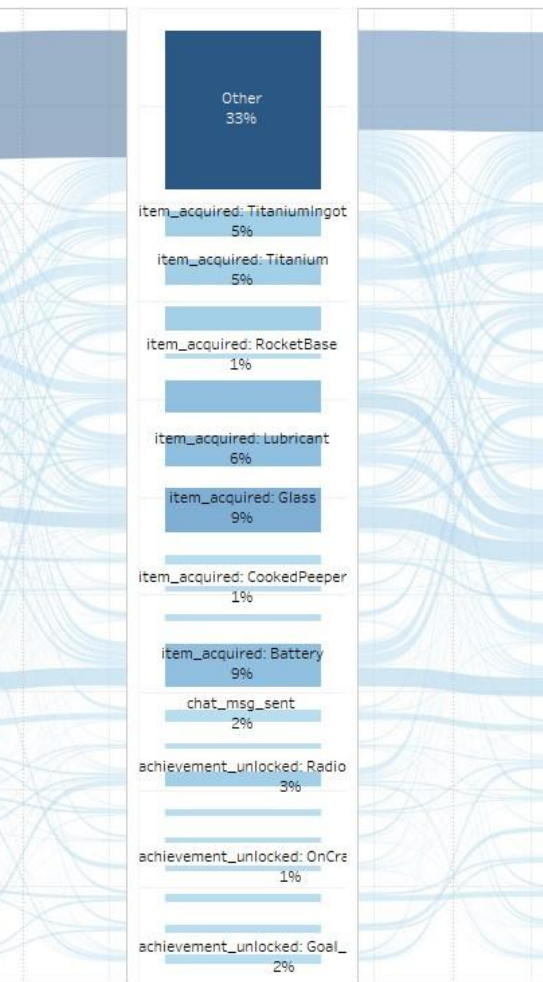
Health  
Stamina  
Water

Power: 68 %

Tools and Equipment



4 Steps Prior



3 Steps Prior



2 Steps Prior

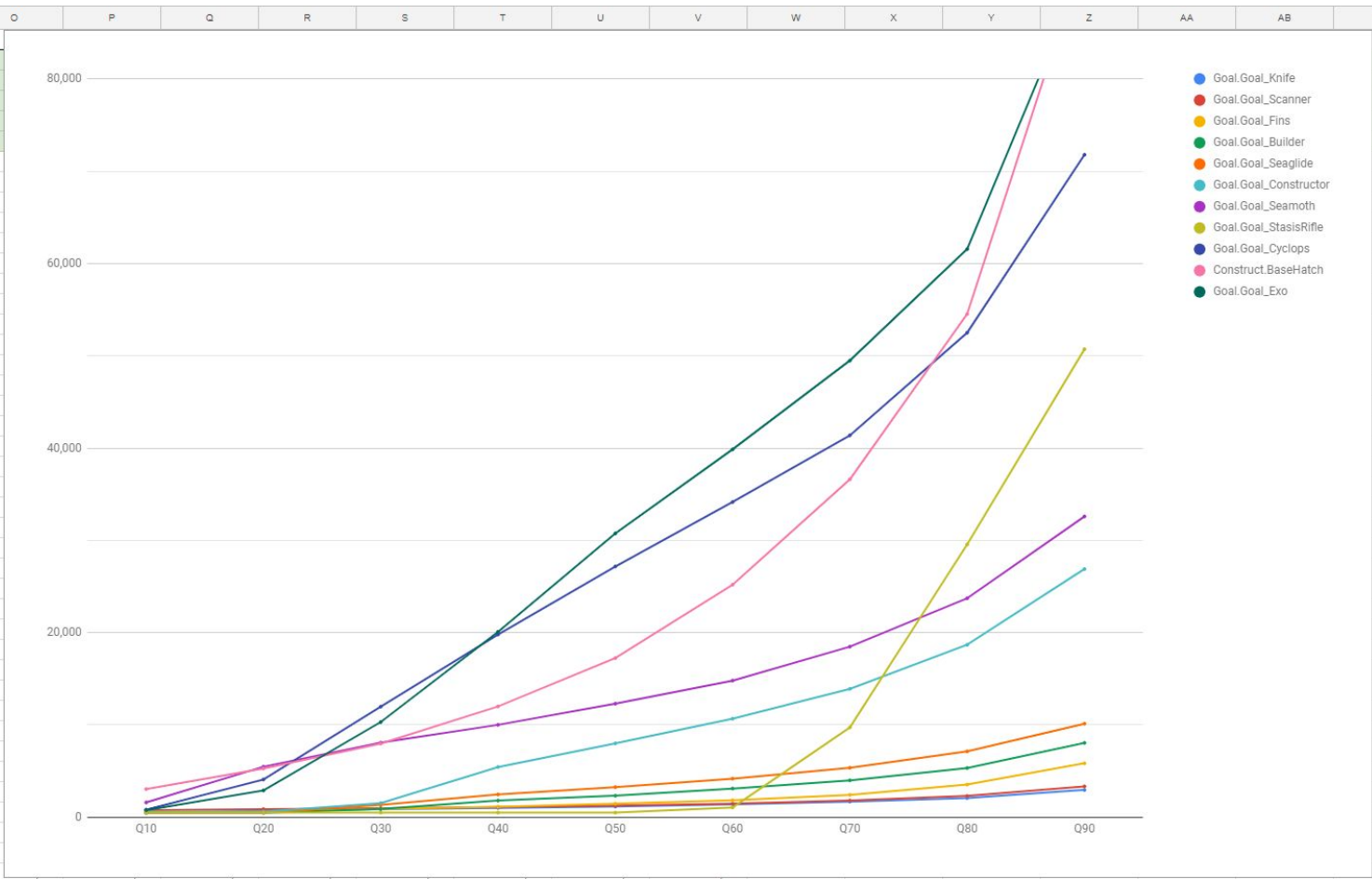


1 Steps Prior





	A	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	A
1	Event	Q10	Q20														
11	Goal.Goal_Knife	483															
12	Goal.Goal_Scanner	769															
14	Goal.Goal_Fins	483															
23	Goal.Goal_Builder	483															
37	Goal.Goal_Seaglide	483															
68	Goal.Goal_Constructor	603															
82	Goal.Goal_Seamoth	1,601															
101	Goal.Goal_StasisRifle	498															
198	Goal.Goal_Cyclops	825															
209	Construct.BaseHatch	3,050															
237	Goal.Goal_Exo	769															
238	Goal.Goal_BiomeSeaTreaderPath	11,352															
239	Construct.PlanterBox	7,310															
240	Construct.Workbench	2,406															
241	Construct.AdvancedWiringKit	11,644															
242	Construct.Trashcans	5,130															
243	Construct.BaseObservatory	2,648															
244	Construct.VehicleStorageModule	21,235															
245	Construct.BaseReinforcement	2,891															
246	Construct.ProcessUranium	8,160															
247	Construct.SmallLocker	4,904															
248	Construct.WhirlpoolTorpedo	20,088															
249	Construct.HeatBlade	13,202															
250	Construct.SeamothSolarCharge	13,435															
251	Construct.Benzene	1,208															
252	Goal.Goal_NuclearReactor	1,900															
253	Construct.StarshipDesk	6,833															
254	Construct.ThermalPlant	2,926															
255	Construct.Cyclops	952															
256	Construct.Beacon	2,886															
257	Construct.Pow_xCellCharger	6,425															
258	Construct.BaseFiltrationMachine	3,857															
259	Construct.DiamondBlade	10,930															
260	Goal.Lifepod2	14,193															
261	Goal.Goal_WaterPark	3,157															
262	Construct.PlanterPot2	8,075															
263	Construct.SeamothElectricalDefense	11,288															
264	Construct.NarrowBed	4,945															
265	Construct.Flare	1,310															
266	Construct.Locker	5,453															
267	Construct.BaseLadder	4,818															



	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V		
1	Event	30%	50%	70%	80%	War	War	Coverage	Count	Average	Deviation	Skewness	Kurtosis	Q10	Q20	Q30	Q40	Q50	Q60	Q70	Q80	Q90		
2	Goal RadioBounceBack	0	1	1	1			91%	2,724	700	2,245	22.05	55,067.692		485	492	506	545	548	551	556	567	608	
3	Goal Goal_PDALoading	1	1	2	2			62%	1,847	2,505	11,766	8.99	105		559	562	566	570	574	582	595	620	753	
4	Goal Goal_Lifepod1	2	2	2	2			66%	1,967	667	704	38.42	1,605		598	601	604	608	612	618	626	643	687	
5	Goal Goal_Lifepod2	1	2	3	3			100%	3,245	922	4,092	23.97	706		502	524	588	606	621	637	661	693	780	
6	Goal Goal_Lifepod3	2	3	3	4			100%	3,321	965	4,153	23.45	670		532	573	622	638	653	674	701	741	831	
7	Goal Goal_Intro1	3	4	4	5			100%	3,475	1,083	4,538	20.62	518		600	662	683	701	713	732	756	794	885	
8	Goal Goal_Copper	3	5	8	14			88%	2,644	1,175	1,717	12.93	235		629	671	706	747	809	883	1,000	1,350	1,806	
9	Goal Goal_Airsack	5	9	13	22			74%	2,227	2,224	7,288	13.70	247		663	730	794	884	1,020	1,129	1,299	1,824	2,842	
10	Goal.Goal_BiomeKelpForest	7	12	19	26			100%	3,064	3,965	13,484	7.02	61		720	806	904	1,020	1,203	1,432	1,657	2,065	3,618	
11	Goal.Goal_Knife	6	11	20	26			100%	3,006	1,634	2,180	15.12	361		483	697	870	1,006	1,158	1,389	1,695	2,079	2,956	
12	Goal.Goal_Scanner	8	13	22	30			84%	2,515	1,891	2,173	6.82	82		769	879	988	1,109	1,251	1,474	1,807	2,302	3,345	
13	Goal.Goal_CookedPeeper	7	12	25	41			58%	1,746	2,648	7,212	14.91	288		758	850	949	1,072	1,218	1,492	2,023	2,947	4,790	
▲ 14	Goal.Goal_Fins	7	16	32	51			70%	2,086	3,057	6,584	8.35	96		483	575	897	1,127	1,466	1,837	2,428	3,539	5,843	
▼ 18	Goal.Goal_Silver	20	33	53	68			61%	1,835	3,627	4,980	10.96	210		1,006	1,437	1,690	1,964	2,467	2,917	3,701	4,598	6,957	
▲ 19	Goal.OnPlayRadioBounceBack	18	31	52	70			63%	1,888	3,818	6,055	7.38	78		765	1,133	1,597	2,010	2,358	2,898	3,635	4,694	6,992	
▼ 21	Goal.RadioGrassy21	17	29	54	79			66%	1,992	5,385	14,020	8.97	104		756	1,068	1,520	1,849	2,262	2,896	3,745	5,224	9,215	
▼ 23	Goal.Goal_Builder	7	30	58	81			78%	2,340	3,586	4,332	3.89	31		483	483	892	1,812	2,330	3,112	3,998	5,332	8,055	
24	Goal.radiosunbeamstart	82	82	82	82	(I)		0%	1	5,399	0	0.00	0		5,399	5,399	5,399	5,399	5,399	5,399	5,399	5,399	5,399	
25	Goal.holydiver	82	82	82	82	(I)		0%	1	5,421	0	0.00	0		5,421	5,421	5,421	5,421	5,421	5,421	5,421	5,421	5,421	
26	Goal.radiolifepod7	82	82	82	82	(I)		0%	1	5,426	0	0.00	0		5,426	5,426	5,426	5,426	5,426	5,426	5,426	5,426	5,426	
27	Goal.goal_radiationfixed	84	84	84	84	(I)		0%	1	5,563	0	0.00	0		5,563	5,563	5,563	5,563	5,563	5,563	5,563	5,563	5,563	
28	Goal.goal_remainingradiationleaks	85	85	85	85	(I)		0%	1	5,571	0	0.00	0		5,571	5,571	5,571	5,571	5,571	5,571	5,571	5,571	5,571	
29	Goal.goal_locationauroradriveinterior	85	85	85	85	(I)		0%	1	5,625	0	0.00	0		5,625	5,625	5,625	5,625	5,625	5,625	5,625	5,625	5,625	
30	Goal.radiosunbeamdestroymessage	87	87	87	87	(I)		0%	1	5,712	0	0.00	0		5,712	5,712	5,712	5,712	5,712	5,712	5,712	5,712	5,712	
31	Goal.RadioGrassy25	9	33	63	89			79%	2,360	4,889	10,872	9.08	116		513	611	1,057	1,955	2,465	3,242	4,270	5,846	9,438	
32	Goal.Goal_CookedGarryfish	15	30	63	90			41%	1,219	4,513	8,115	11.01	193		879	1,050	1,405	1,860	2,318	3,202	4,270	5,920	9,888	
33	Goal.radiolifepod17	93	93	93	93	(I)		0%	1	6,050	0	0.00	0		6,050	6,050	6,050	6,050	6,050	6,050	6,050	6,050	6,050	
34	Goal.Goal_BiomeGrassyPlateaus	31	49	79	103			71%	2,135	7,365	15,430	5.63	43		1,280	1,863	2,370	2,937	3,450	4,223	5,235	6,664	10,967	
35	Goal.Goal_Lubricant	30	51	81	109			54%	1,626	5,007	5,877	7.12	86		1,176	1,827	2,294	2,876	3,586	4,390	5,379	7,026	9,739	
36	Goal.OnPlayRadioGrassy21	24	40	71	110			48%	1,430	6,679	14,625	7.55	80		1,039	1,514	1,931	2,314	2,890	3,615	4,733	7,116	12,782	
37	Goal.Goal_Seaglide	14	46	81	111			65%	1,963	4,728	5,702	3.57	24		483	483	1,353	2,463	3,263	4,180	5,358	7,138	10,132	
▲ 38	Goal.Goal_RadSuit	27	47	81	112			53%	1,583	6,144	12,398	8.47	100		1,007	1,596	2,121	2,676	3,329	4,155	5,349	7,208	10,436	
▼ 40	Goal.RadioShallows22	20	48	86	116			65%	1,953	5,502	9,447	8.49	122		498	498	1,681	2,607	3,375	4,392	5,657	7,479	10,997	
▼ 43	Goal.RadioRadioSuit	27	47	83	127			57%	1,716	7,304	14,850	5.97	47		1,341	1,706	2,094	2,750	3,311	4,200	5,486	8,115	13,189	
44	Goal.Goal_BiomeSafeShallowsCave	22	38	74	129			43%	1,283	7,727	15,156	5.06	38		1,032	1,487	1,813	2,184	2,794	3,439	4,941	8,223	19,656	
45	Goal.Goal_Bleach	32	48	85	131	(I)		29%	859	6,451	8,414	3.84	23		1,685	2,126	2,446	2,883	3,409	4,267	5,629	8,366	14,727	
46	Goal.Goal_PurifiedWater	39	63	107	143			48%	1,432	6,848	16,133	27.35	910		1,707	2,291	2,822	3,405	4,288	5,259	6,932	9,058	13,508	
▲ 47	Goal.OnPlayRadioGrassy25	44	72	123	169			43%	1,285	9,121	16,239	6.55	62		1,147	2,317	3,157	3,896	4,843	6,058	7,896	10,633	18,012	
▼ 49	Goal.OnPlayRadioShallows22	52	83	134	175			36%	1,070	8,700	10,941	4.56	34		1,731	2,808	3,644	4,545	5,453	6,977	8,552	11,018	18,911	
50	Goal.Goal_CookedHoverfish	37	70	120	182	(I)		24%	709	8,398	11,913	4.15	26		1,375	1,982	2,736	3,452	4,682	6,180	7,710	11,400	16,657	
51	Goal.OnPlayRadioRadiationSuit	51	82	140	184			38%	1,127	9,958	14,498	4.26	26		2,167	2,906	3,546	4,374	5,390	6,860	8,921	11,569	20,647	

# Telemetry

~~Unity Analytics~~

Raw data

Custom processing

⚠️ GDPR ⚠️

Game event  $\approx$  website visit

Matomo

Amazon Redshift



# Hey, listen!

Fix negative feedback

Integrate positive feedback

Call out suggestions

→ e.g. *Dead Cells*

## Balancing

Community suggestion **Dash shield** velocity no longer reduced when hitting breakable props

Community suggestion **NutCracker** no longer removes stun/root/frost when it deals a critical hit.

Blueprints dropped by the Hand of the King will now be unlocked immediately, as you pick them (there's no Collector shop behind him).

**Decoy** explosion now creates multiple small bombs.

Hero pets should now attack invisible enemies if their invisibility is temporarily suspended.

The **Purulent Zombie** in **graveyard** now has a whole new gameplay.

The **Purulent Zombie** in **sewers** now has a whole new gameplay.

Community suggestion Legendary altars can no longer shield elites. *Version 1.2.1*

Elite "Cage" skill is now slightly larger but also inflicts slightly more damage. *Version 1.2.1*

Community suggestion Flask refills bought from shops received a permanent 40% discount. *Version 1.2.1*

Community suggestion Mobs will now be locked for a longer time after a BC4 teleportation (no more "instant attack after teleportation"). *Version 1.2.1*

Community suggestion Mob teleportation now interrupts elite skills like "Cage" or "Electric Field". *Version 1.2.1*



# Three Requirements

1. Cultivate an open mind to feedback and serendipity.
2. Set aside real calendar time for stewing and simmering.
3. Farm fertile ground.

30:19 / 44:41



Luck and Listening in Game Design

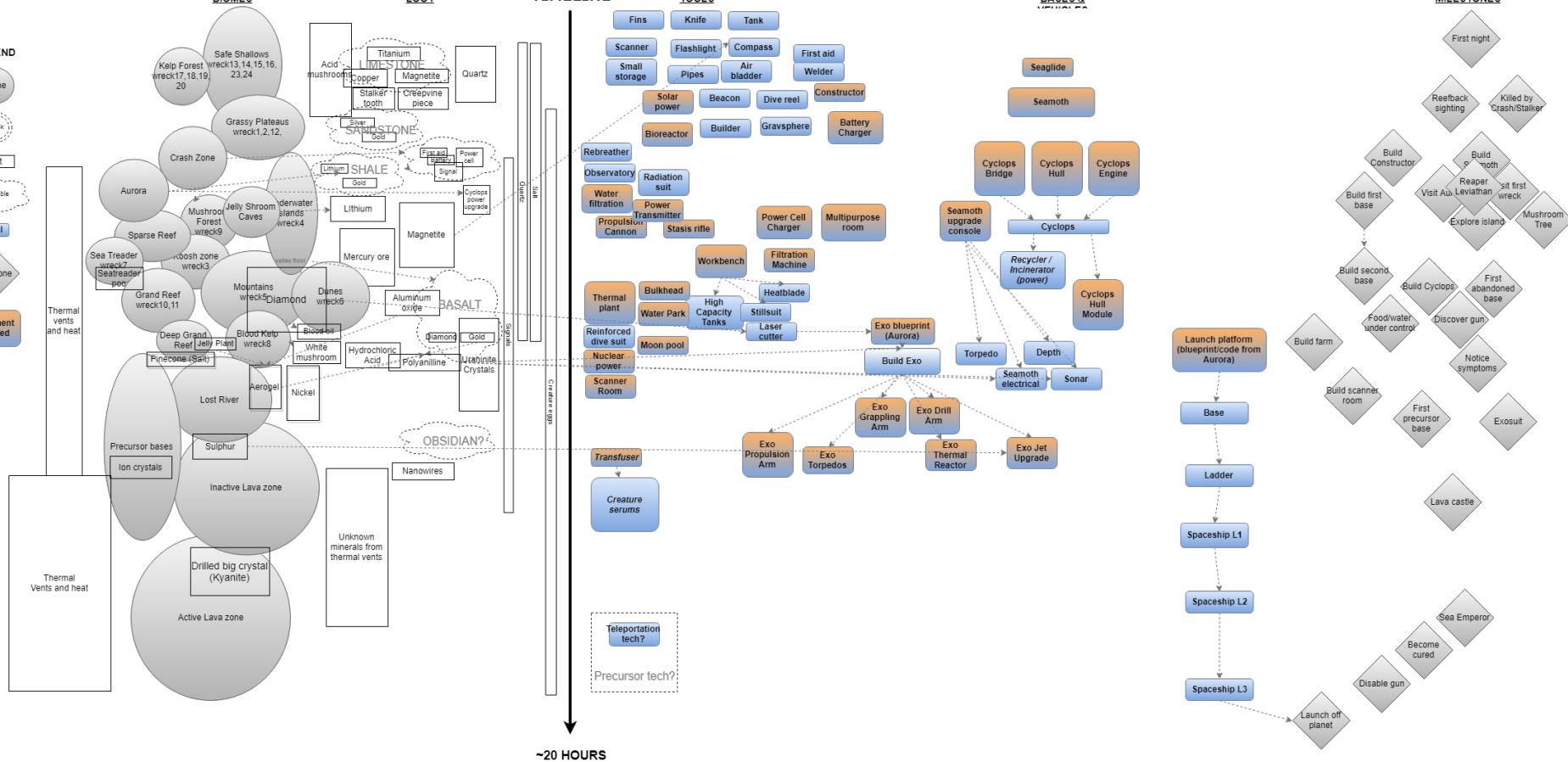
604 views

32 0 SHARE SAVE ...



Chris Hecker  
Published on Sep 21, 2018

SUBSCRIBE 522







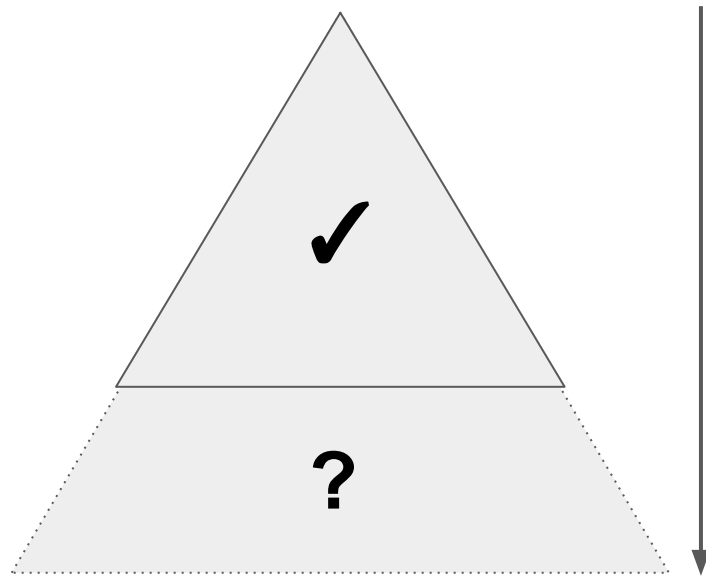
Iteration\*

# Evaluation

Survival sandbox

Exploration adventure

But why?!



# Brian's Epic Chart

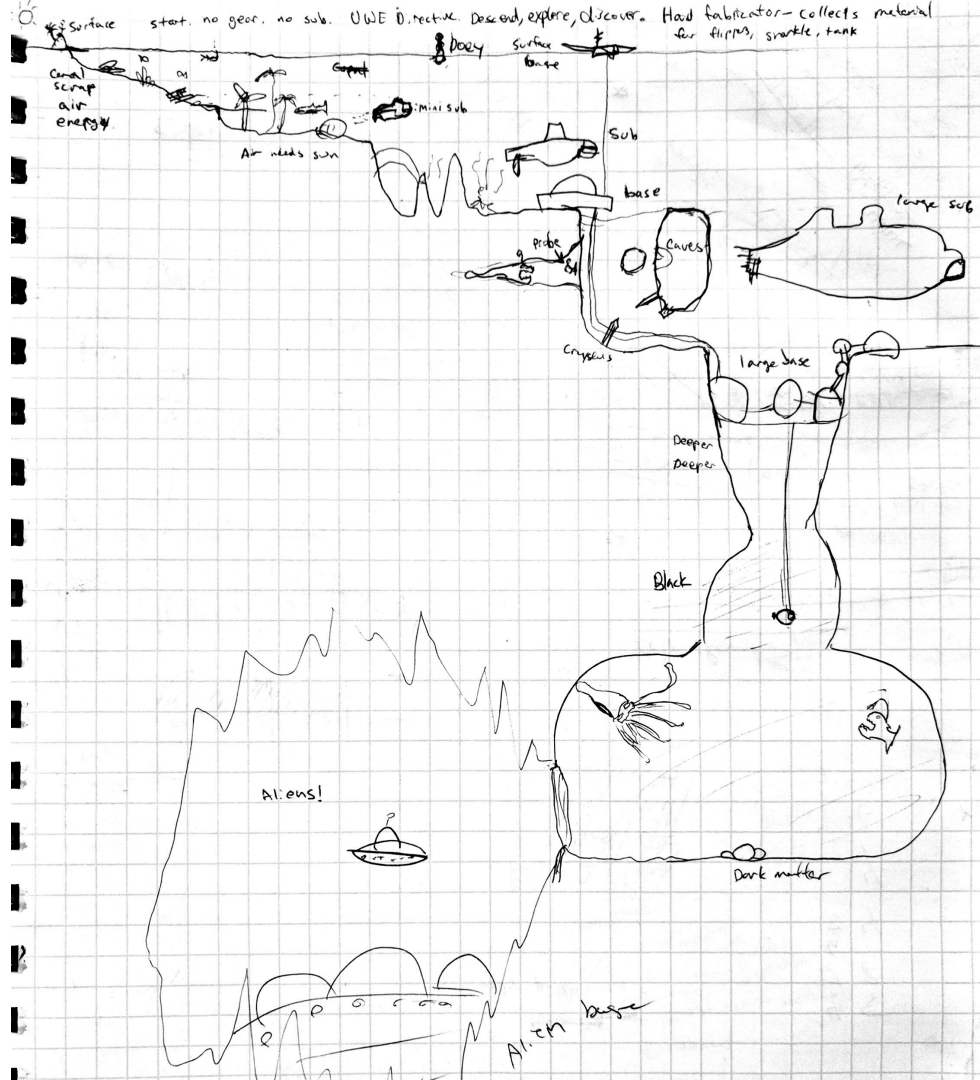
Descend

Explore

Discover

...

Aliens!





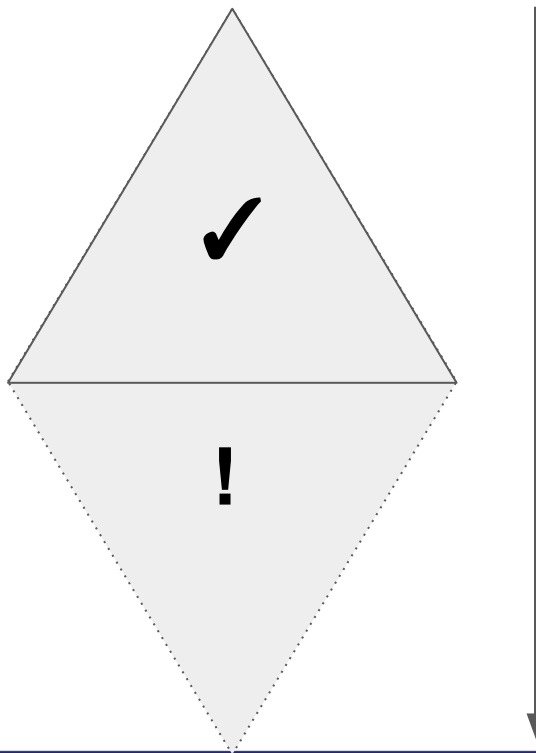
# Story

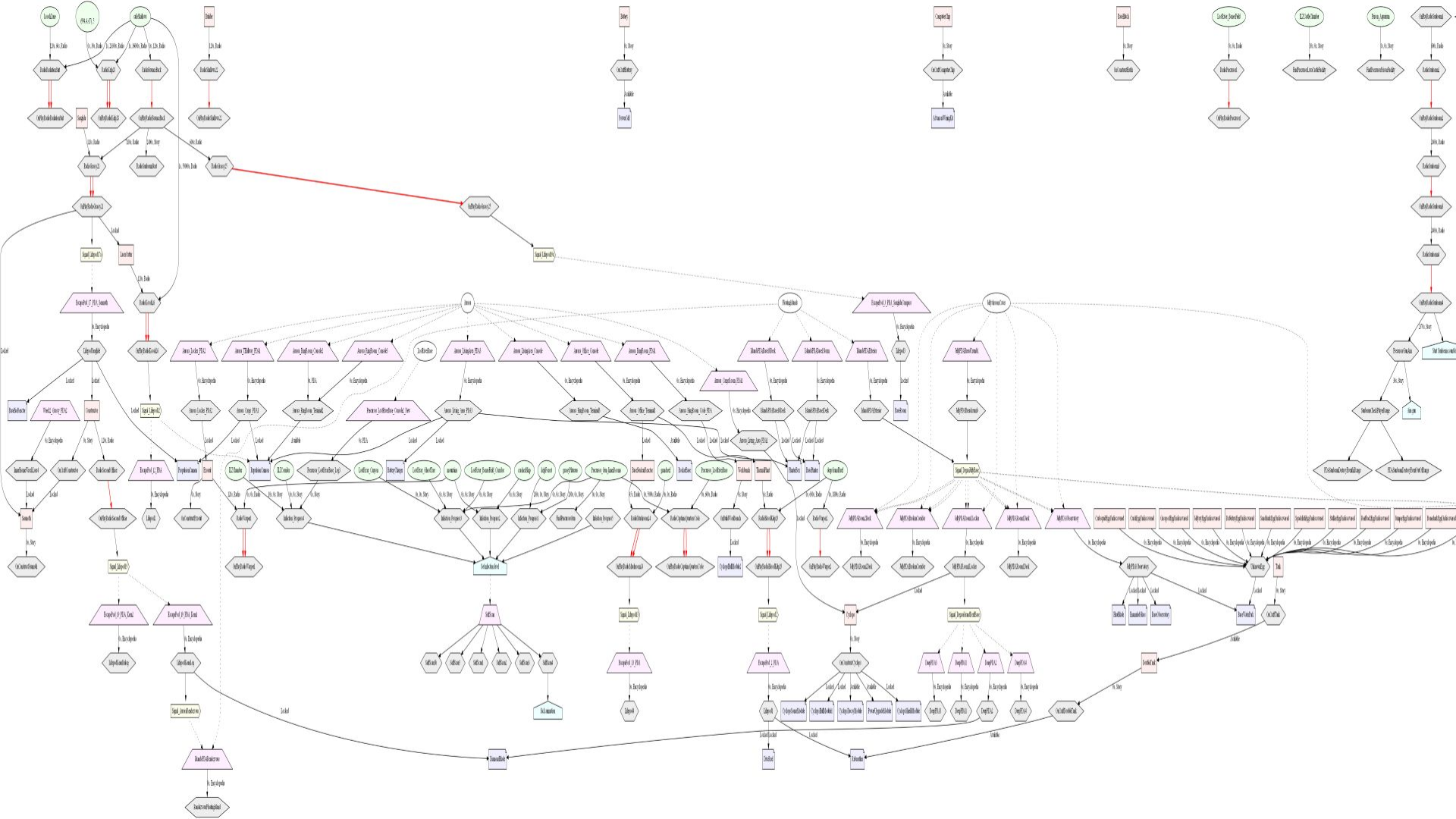
Main story implicit

Concurrent storylines

Overlapping parts

→ Nonlinear





100m

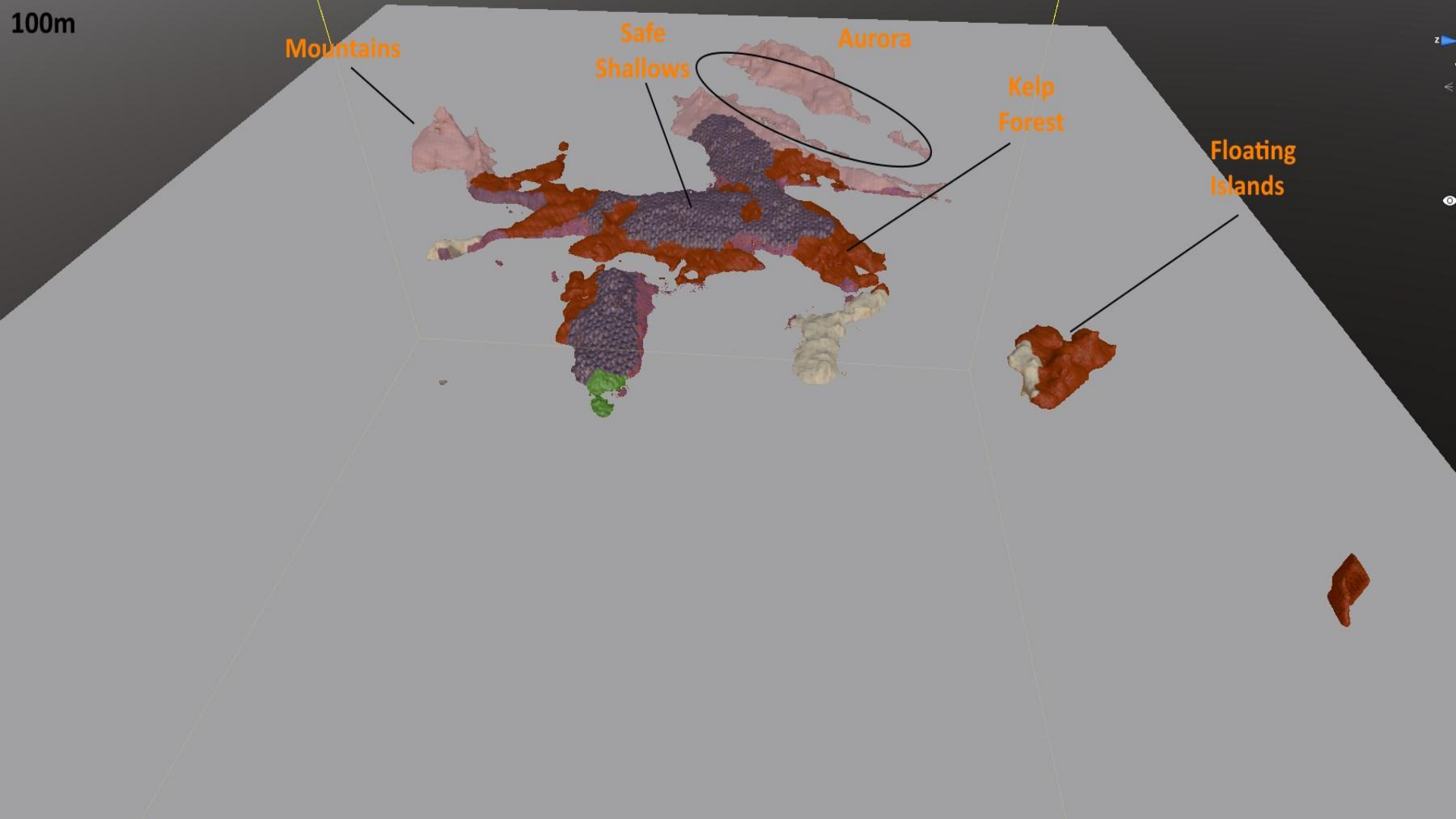
Mountains

Safe  
Shallows

Aurora

Kelp  
Forest

Floating  
Islands





200m

Mountains

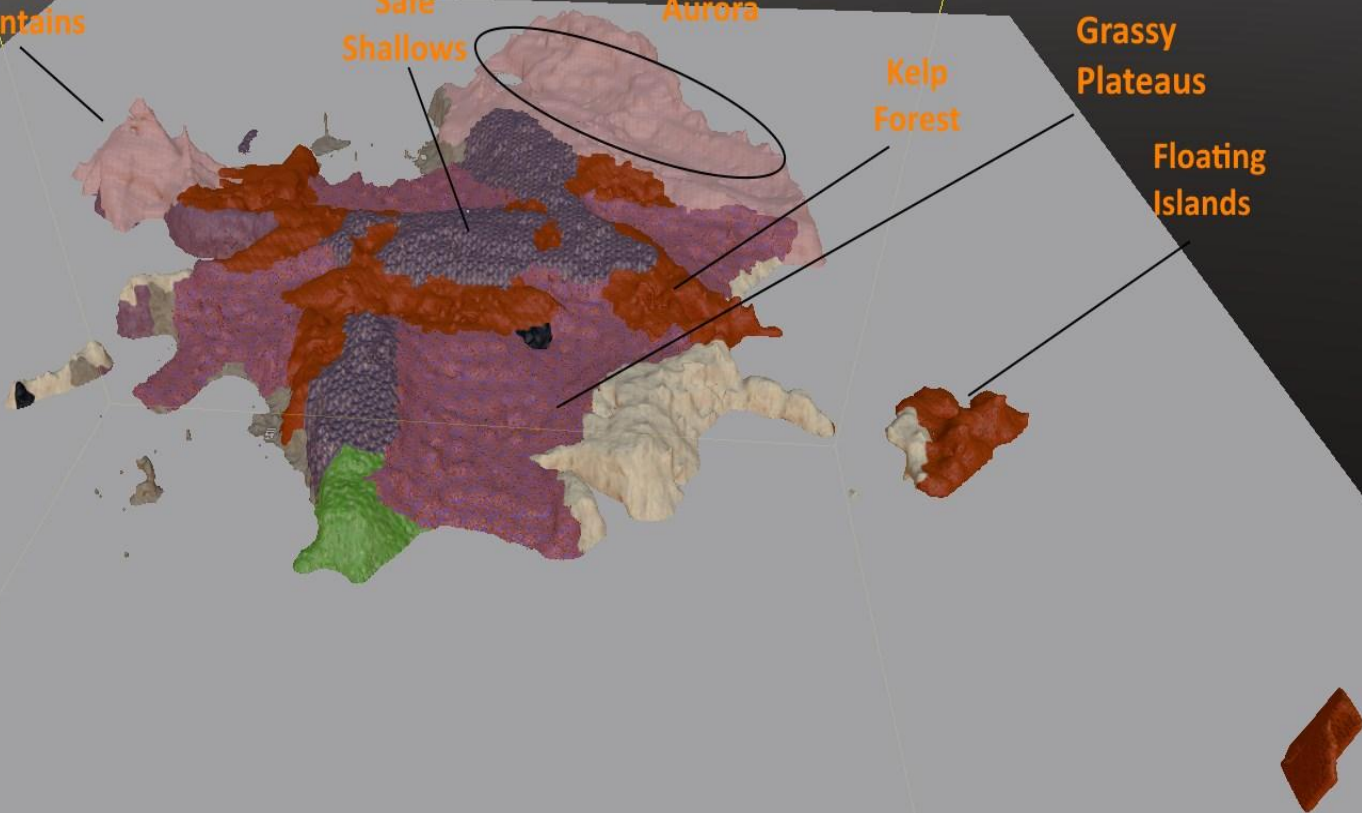
Safe  
Shallows

Aurora

Kelp  
Forest

Grassy  
Plateaus

Floating  
Islands



300m

Mountains

Safe  
Shallows

Aurora

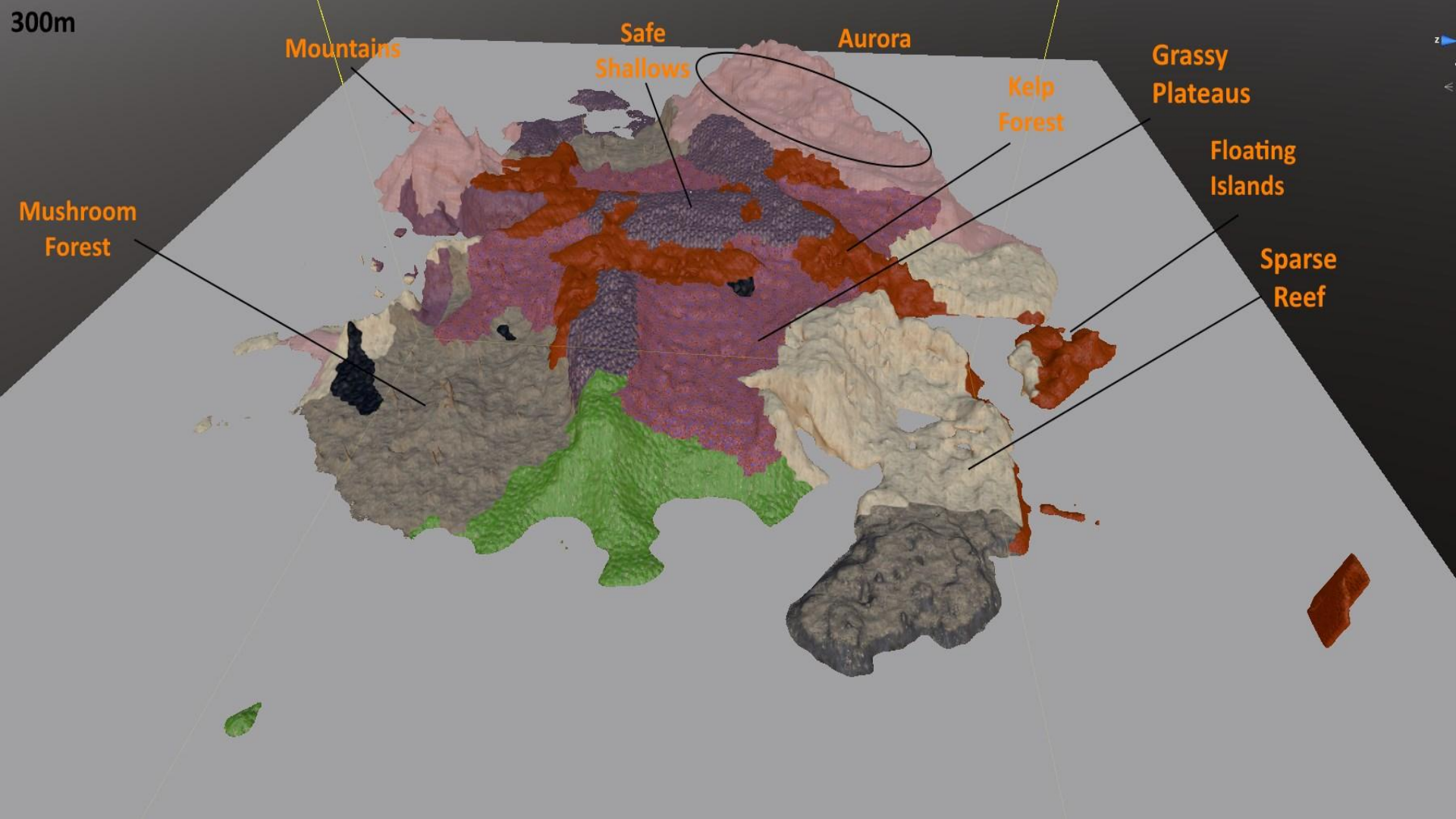
Kelp  
Forest

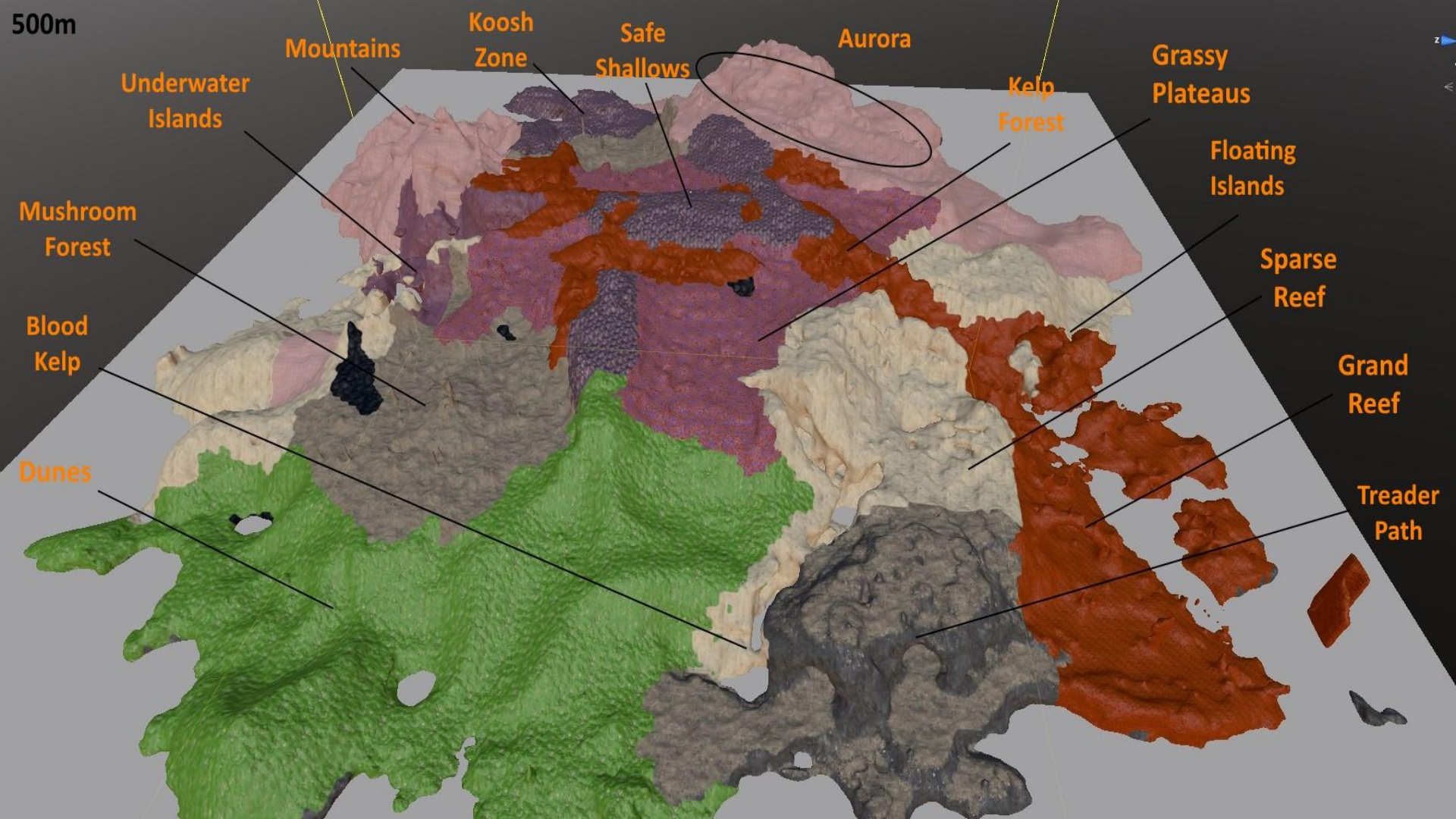
Grassy  
Plateaus

Floating  
Islands

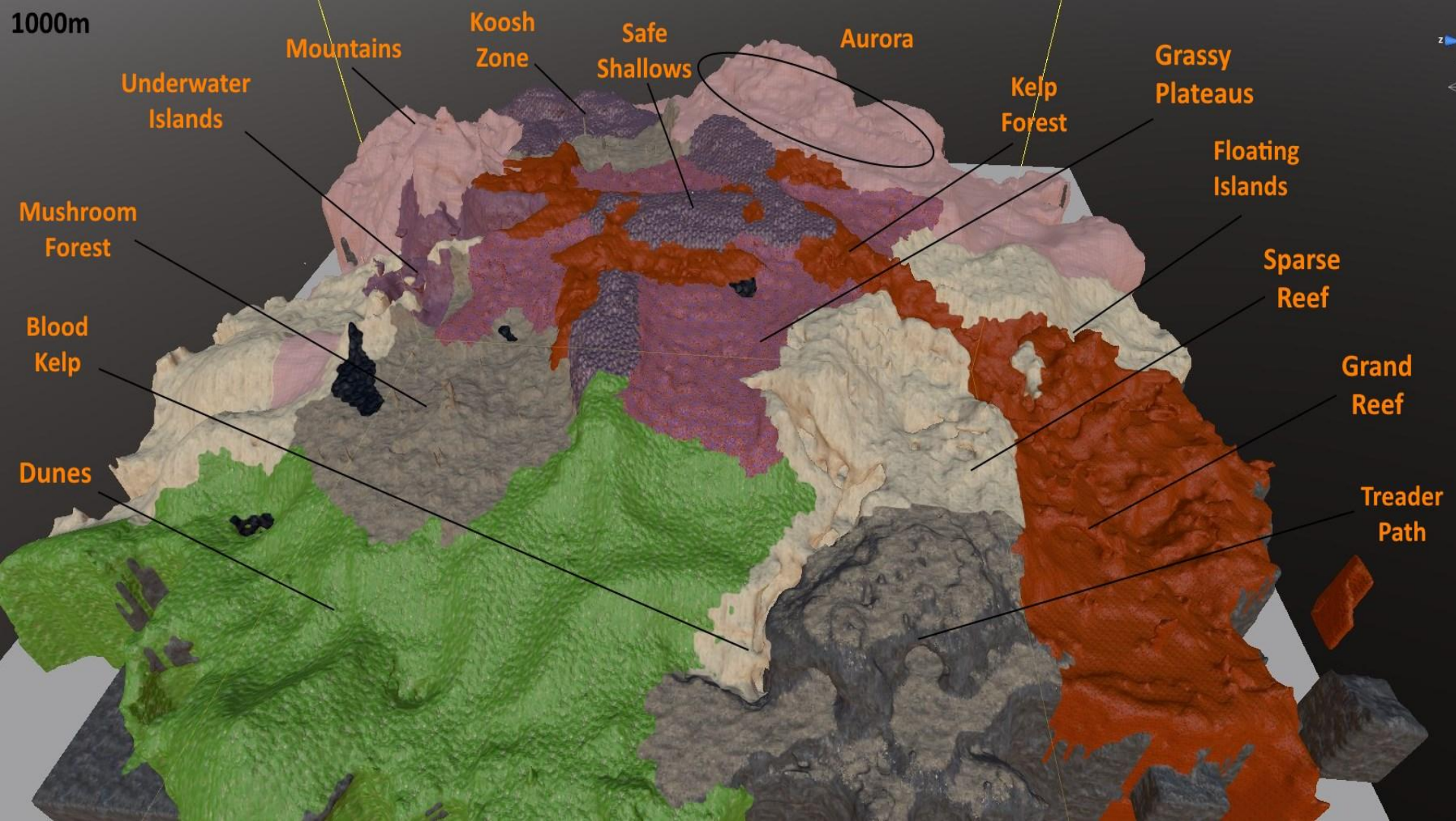
Sparse  
Reef

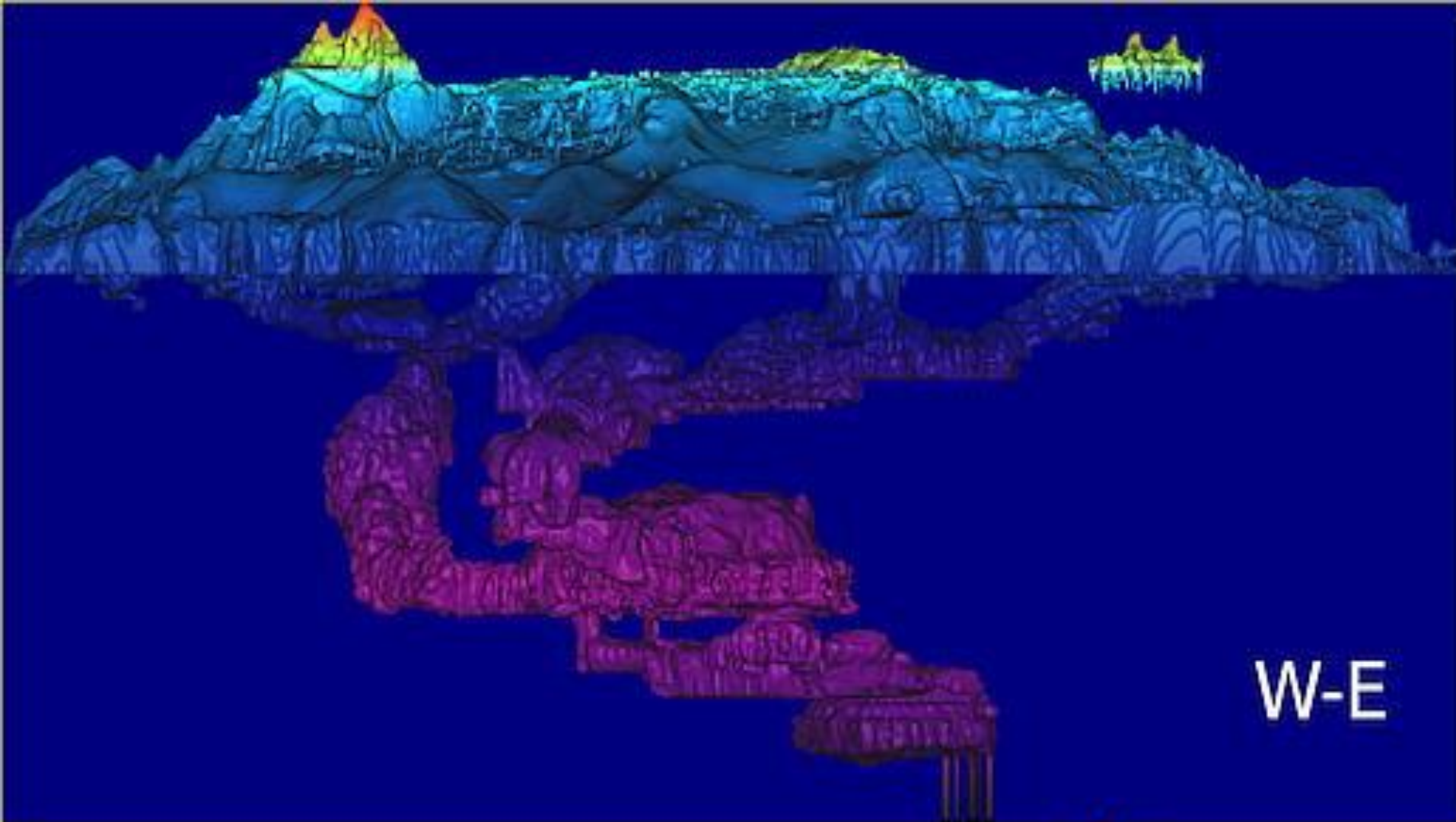
Mushroom  
Forest



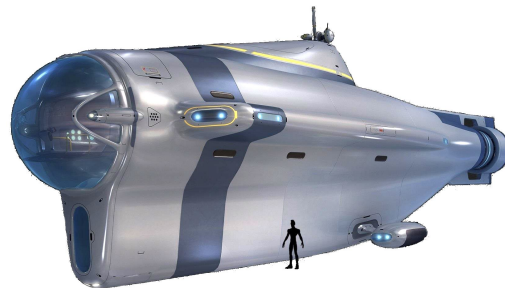
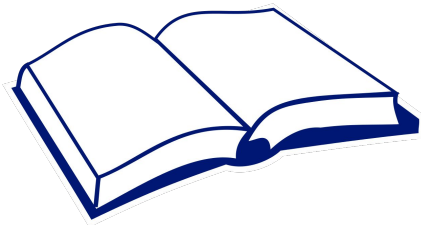
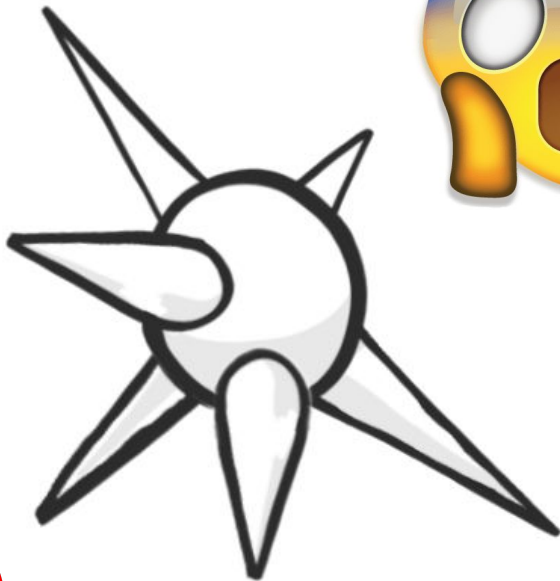








THE  
ABYSS





# Cut

Multiplayer

Terraforming

Colonization

Weather

Ecosystems

Emergence

Transfuser



**Jim Unwin**

@jim\_unwin

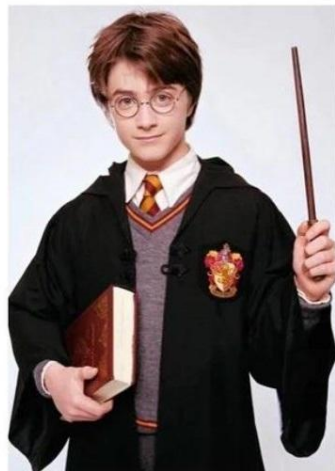
## Developers

# Technical Debt

Developers at the beginning of a project.

vs.

Developers at the end of a project vs. GDD post-mortem



Survivorship bias

1:32 AM - 28 Feb 2019



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# Result

GDC

GAME DEVELOPERS CONFERENCE

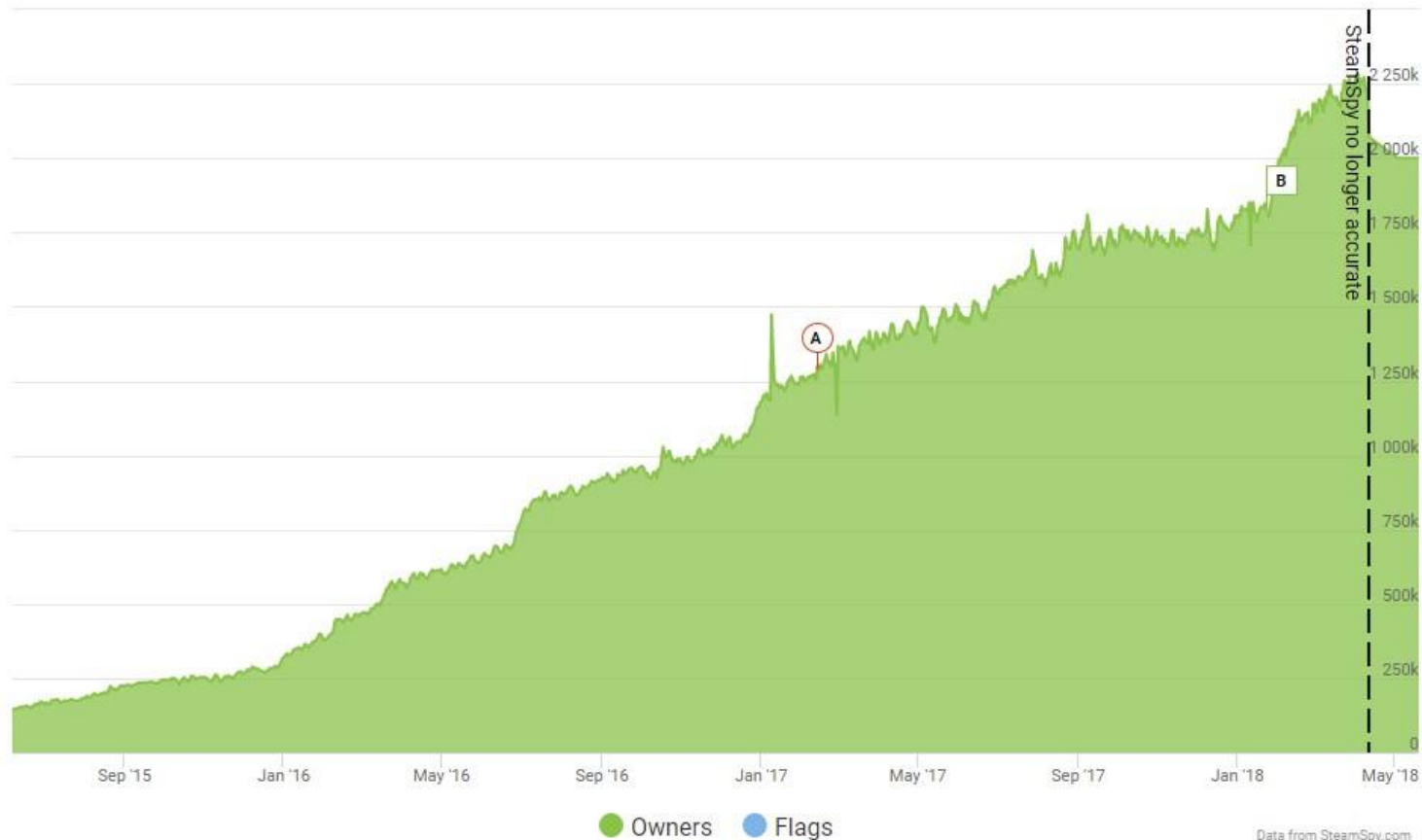
MARCH 18–22, 2019 | #GDC19



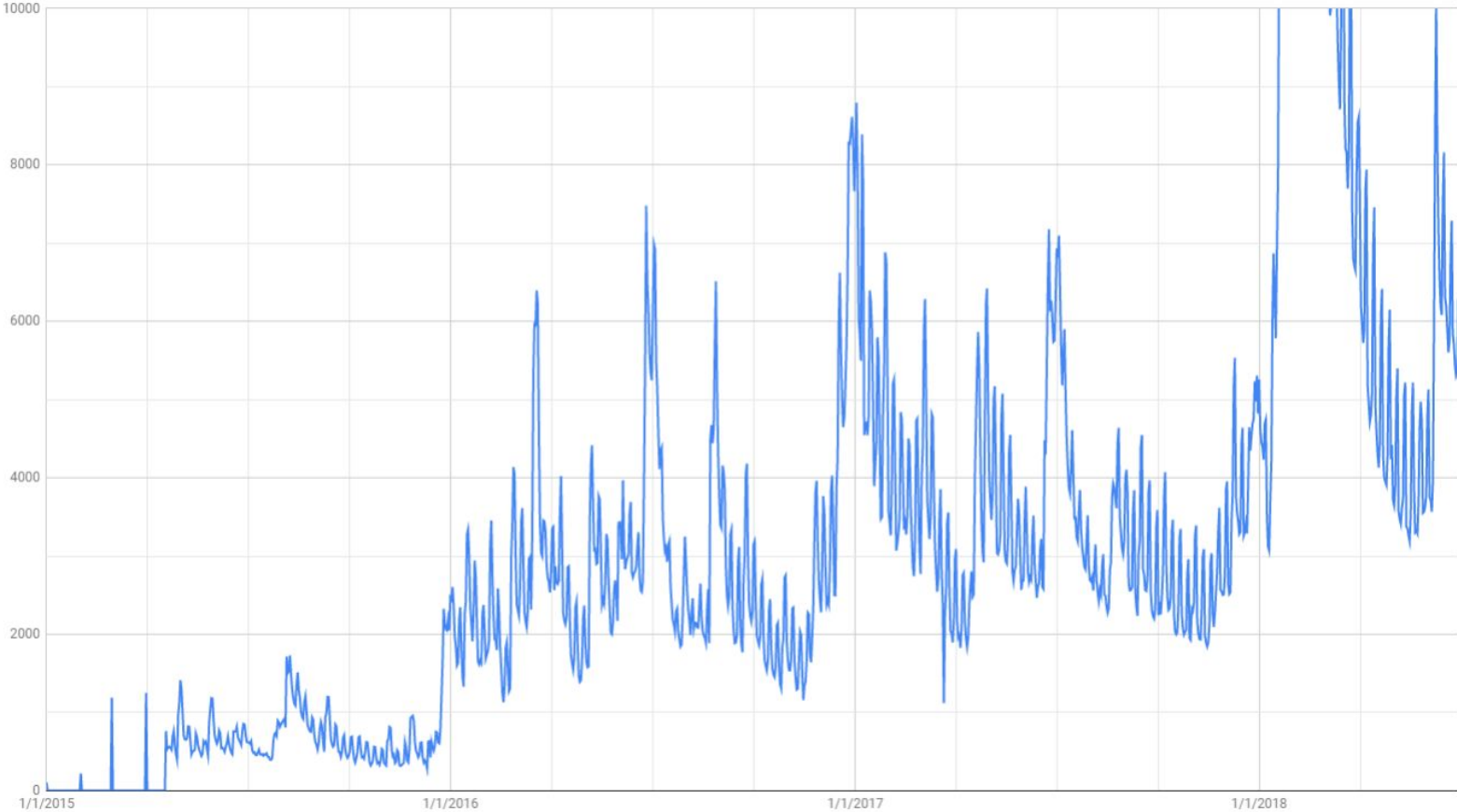


# SteamSpy Estimated Owners

Zoom 1w 1m 3m 6m 1y 3y all



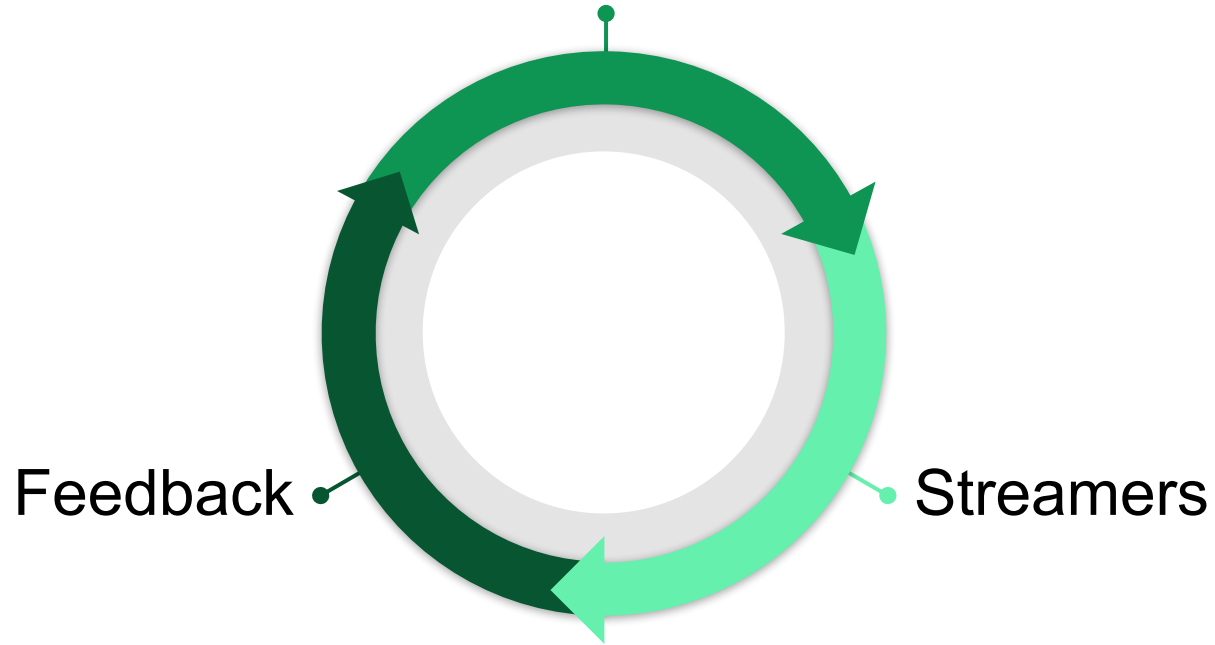
Concurrent Players

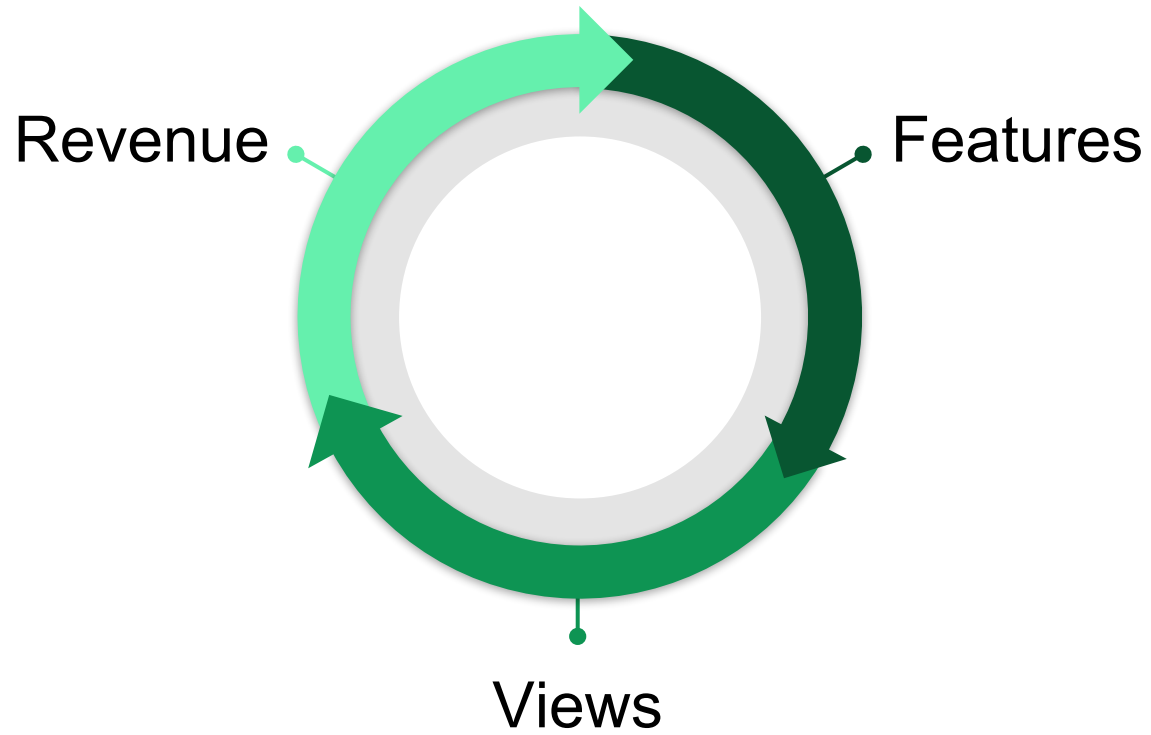


# Open Development

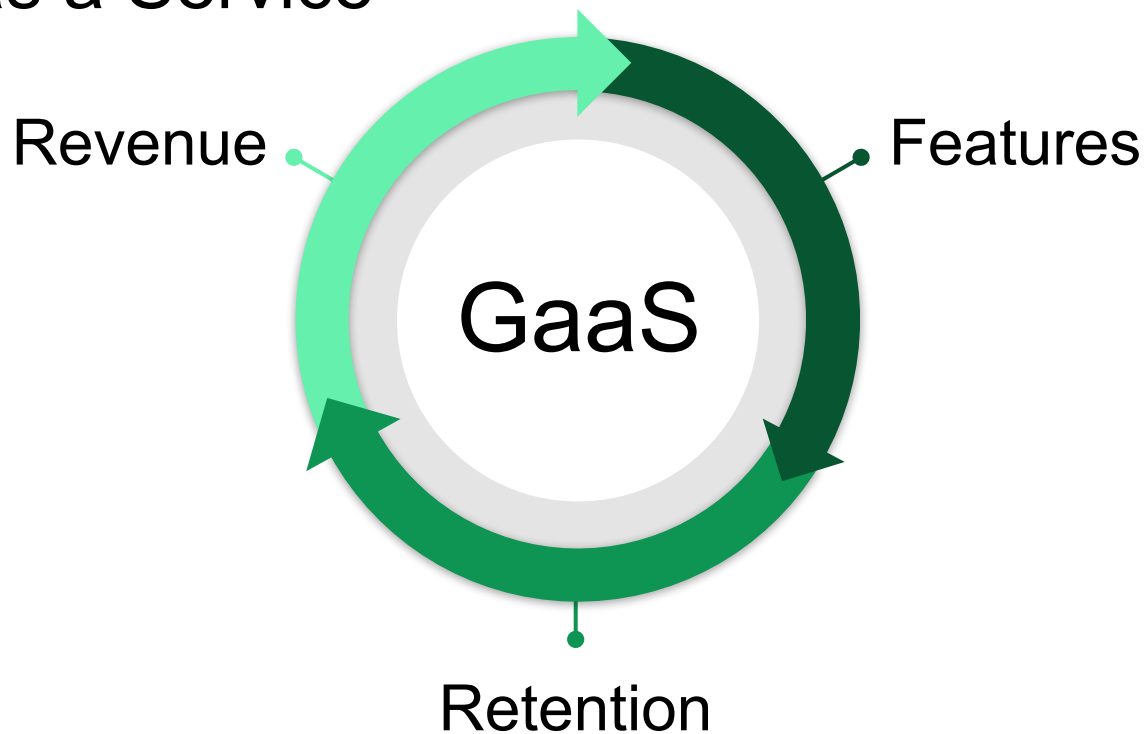


# Open Development



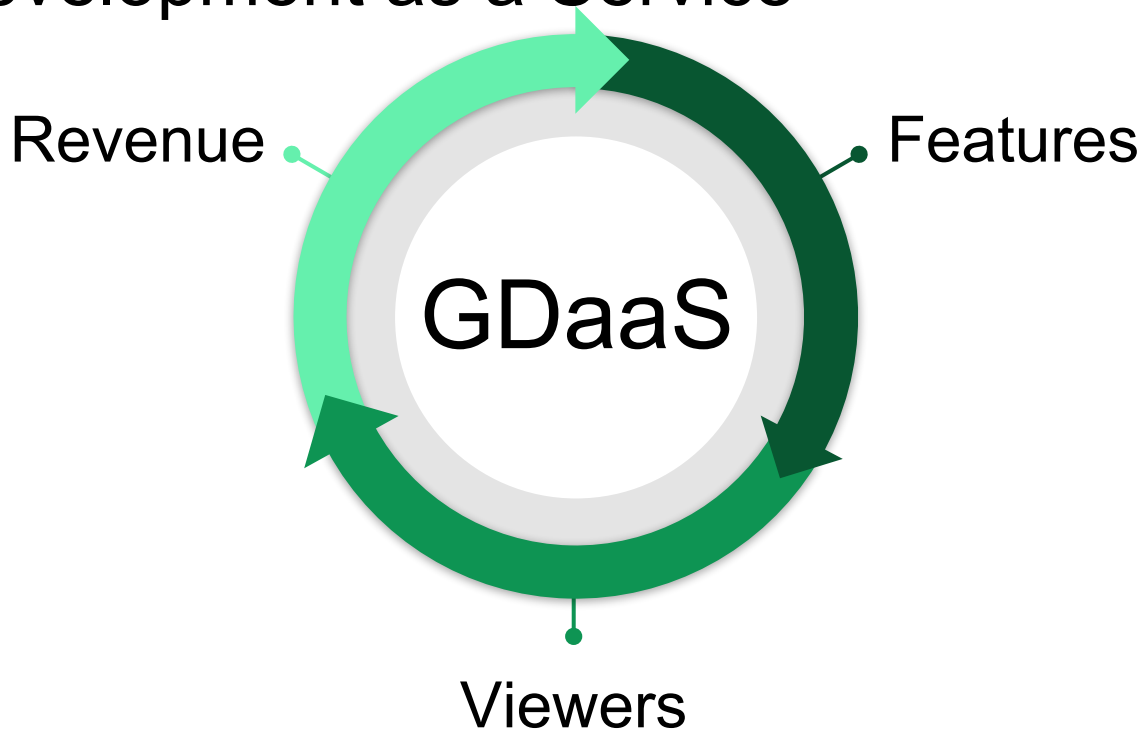


# Games as a Service





# Game Development as a Service



A vibrant, stylized underwater scene. In the foreground, there are large, colorful coral structures with orange and red tops and dark green bases. A school of small, dark fish swims in the background. The sun is visible at the top, casting rays of light through the water. The text "Early Access is a show" is centered in the middle of the image.

Early Access  
is a show







# ~~Marketing~~

Youtubers

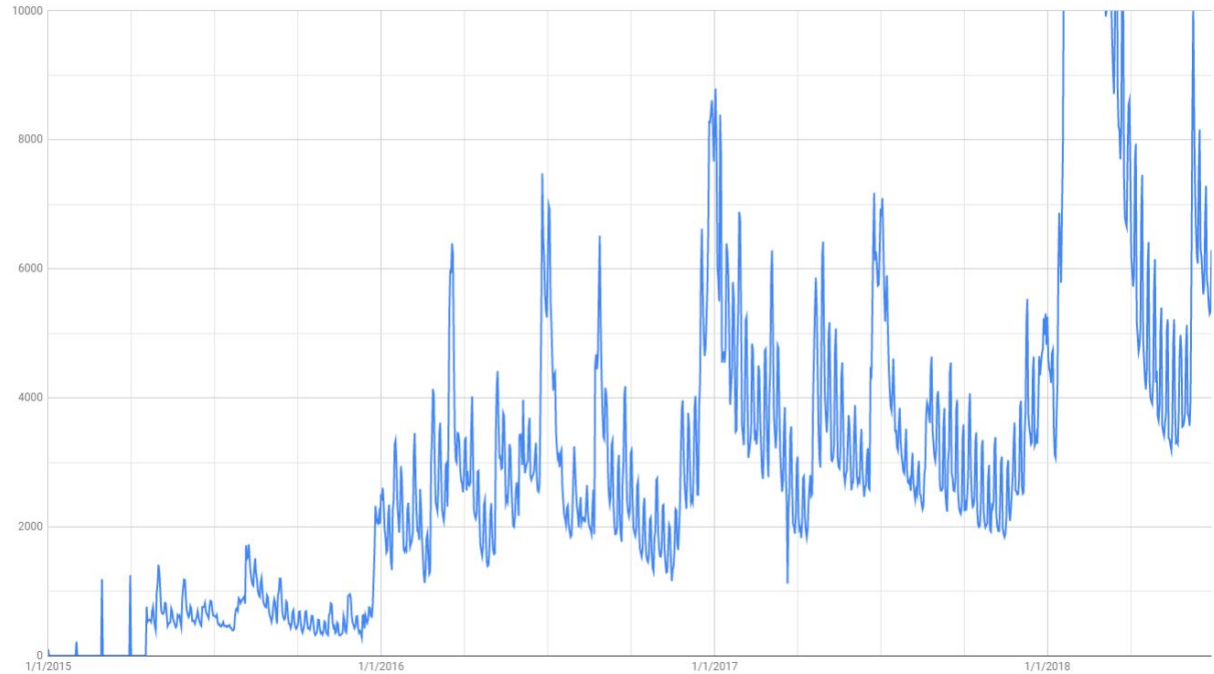
Twitch streamers

Steam features

Social media

Press

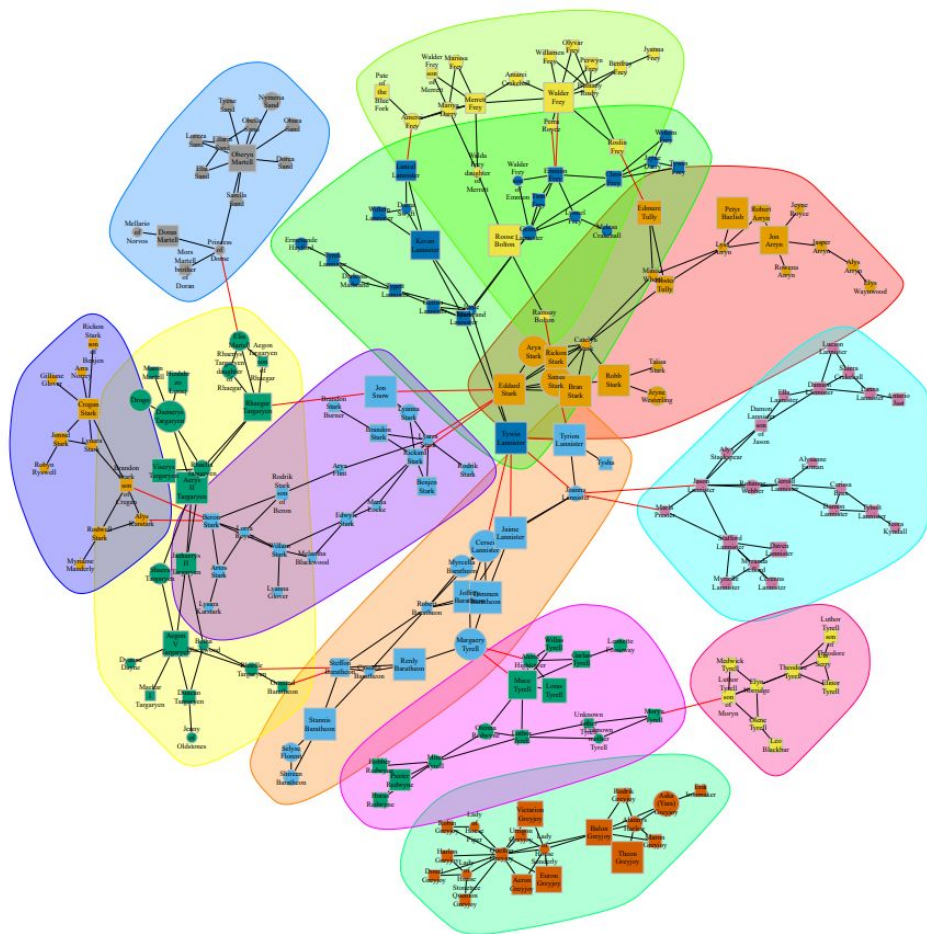
Concurrent Players



# Infinite Market

Fragmentation

Cluster exhaustion





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# Summary





# Summary

Build prototypes

Define spikes

Minimum viable product

Get user feedback

Iterate

Execution matters

Design for emotions

Listen to your game

Listen to your players

Listen to your instincts

# Summary

Streamers generate traction

Open development

Community management

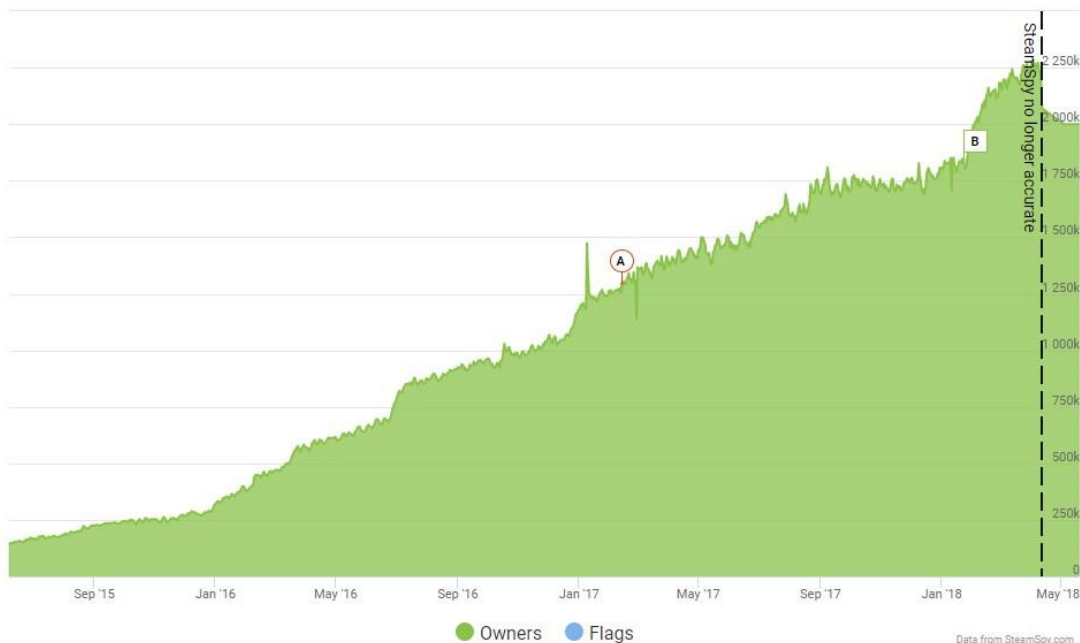
Early Access is a show

Ship often



SteamSpy Estimated Owners

Zoom 1w 1m 3m 6m 1y 3y all






# Thank you!



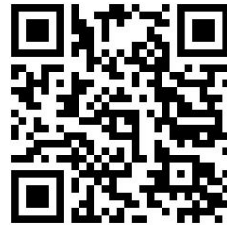
Jonas Bötel



 @codelumpn



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# We're hiring!

<https://unknownworlds.com/jobs/>

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