



Let Me Think!

-Why Workflows Matter

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Nikoline Høgh

User Experience Lead at Unity



STORY

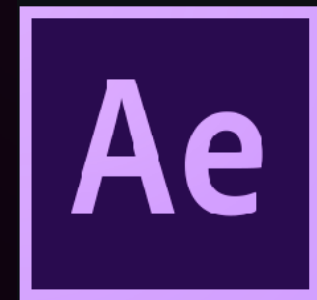
How a migraine started a career



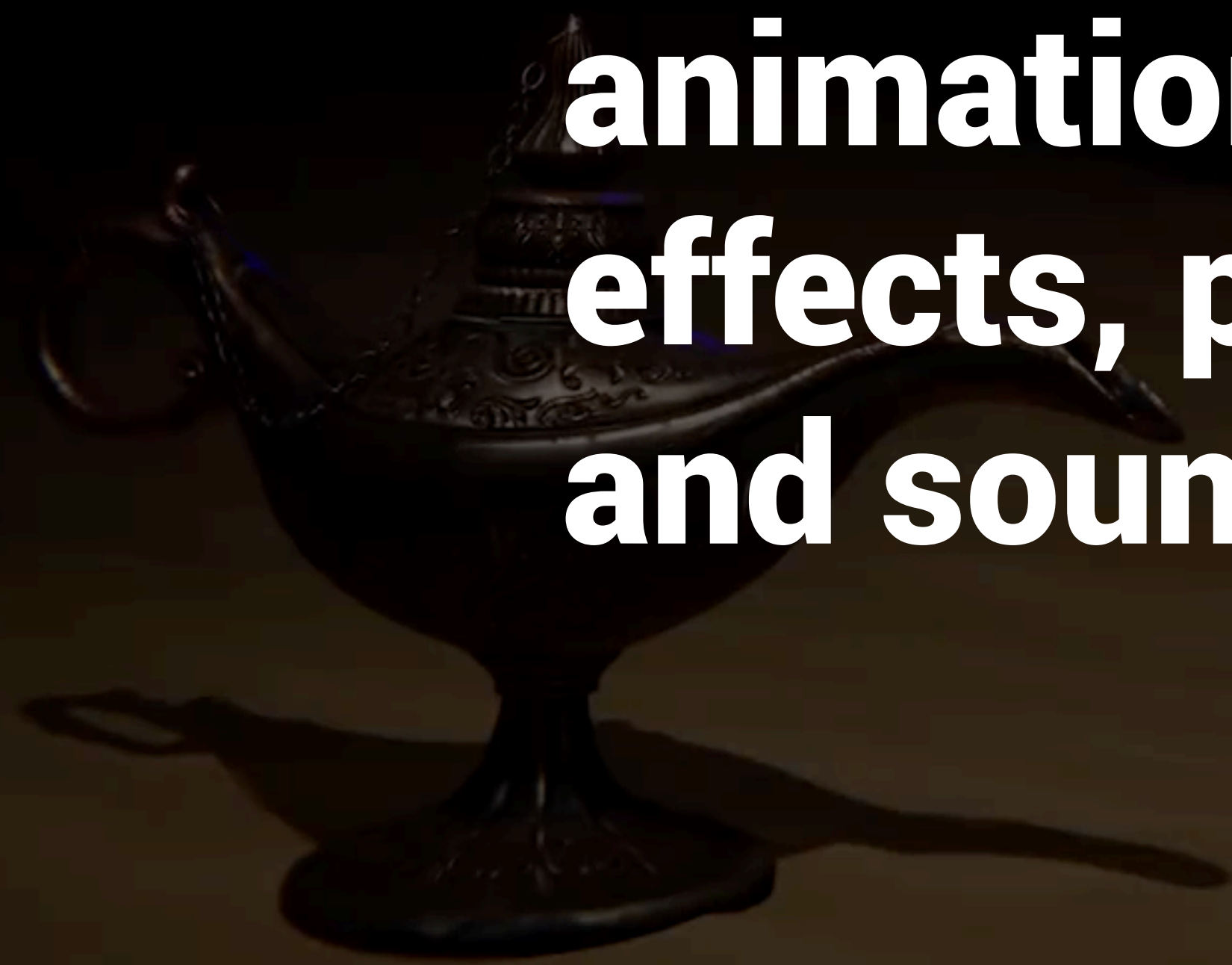
What is a workflow
How to design good workflows
Why design for workflow



Software for the creative industry



**Unity brings together
animation, visual art,
effects, programming
and sound..**





Monument Valley

UsTwo Games



LEGO Playground

AR app blending digital and physical worlds of play



Volvo and Varjo

Enable safe driving with VR



Heretic Demo

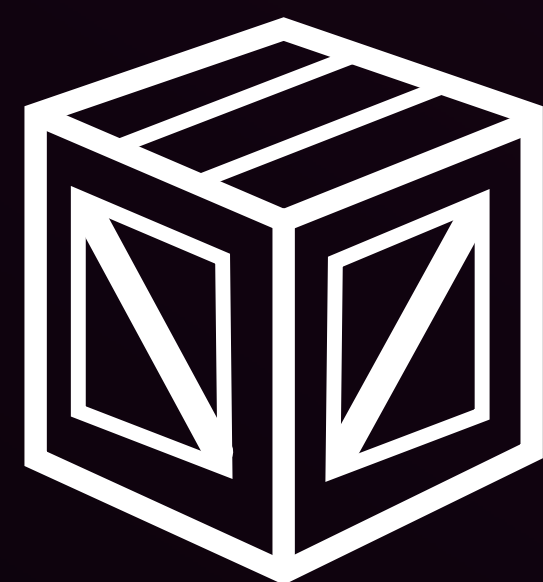
Unity Stockholm Demo Team

**...powering a creative
industry of makers,
artists, play, expression
and change**

What is a creative workflow

How to design for workflows

Why consider workflows?





Angelica Kauffmann

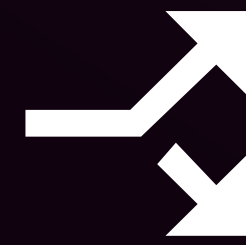
A universal human
practice that you can
improve over time

Experimentation
+
Problem-solving

Aspects of creative practice



Flow



**Divergent
Thinking**



Iteration



Flow

The experience of flow is to feel comfortably challenged, productive and “in the zone”.
You lose track of time.

→ Divergent Thinking

Purposefully creating multiple different solutions to a problem and comparing them, letting new ideas spring from the old.



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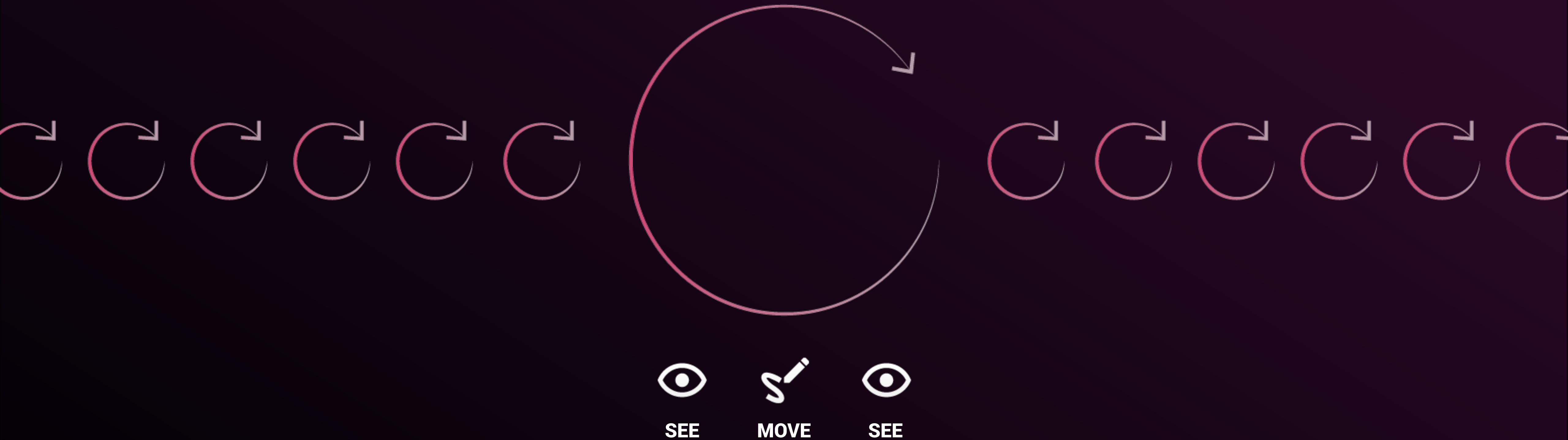
Iteration

Interacting with the material of your design making a series of small experiments to achieve an outcome



Iteration

Interacting with the material of your design making a series of small experiments to achieve an outcome



Workflow Example





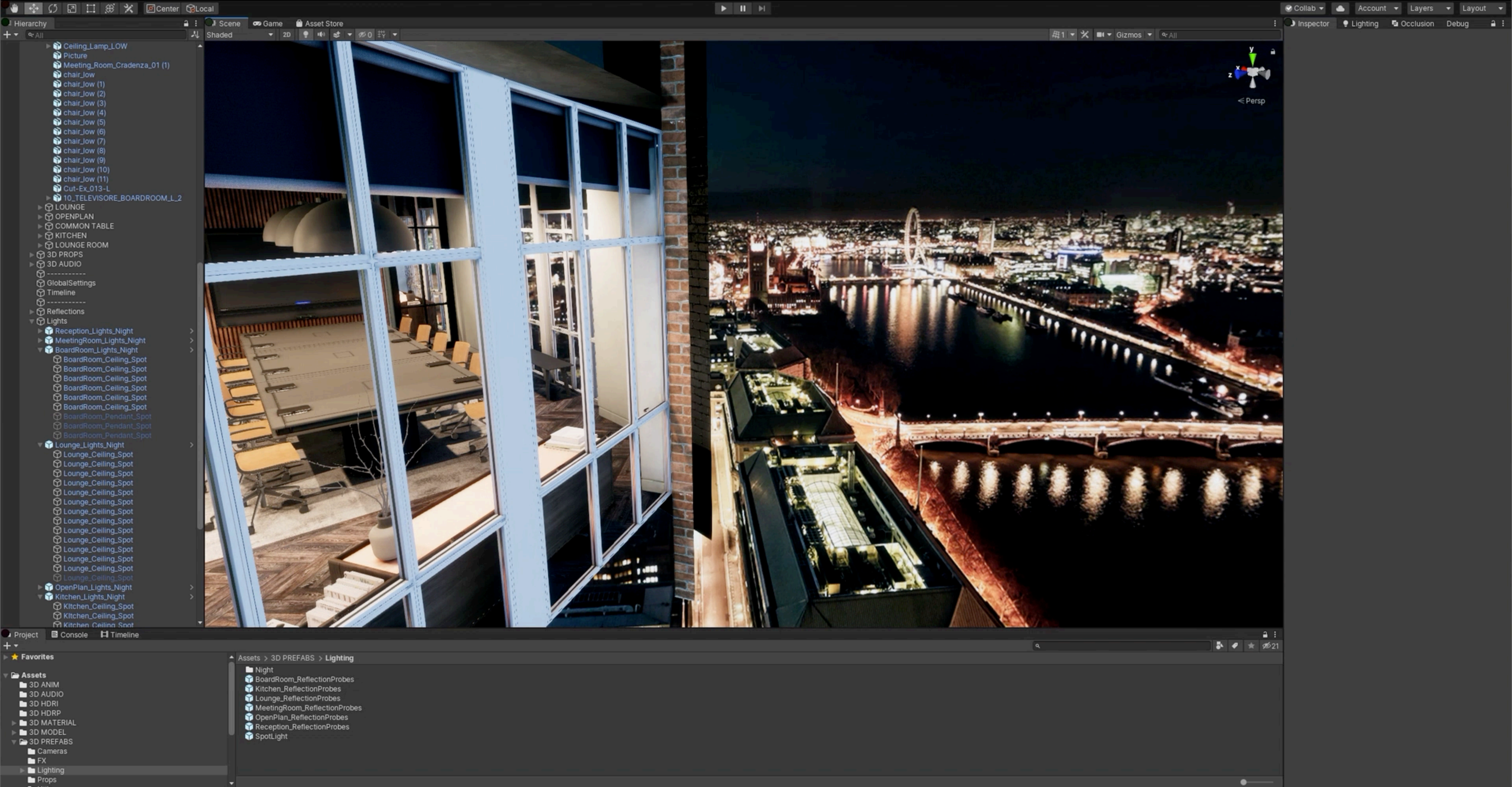
Task

A lit office interior at night



Task

A lit office interior at night



Lighting workflow



Add a light



Add another light and change properties



Settings and Post Processing



Final Render

A workflow is..

A set of steps taken to achieve an outcome

A workflow is..

Iterations

A set of  steps taken to achieve an outcome

A workflow is..

Iterations

Through experimentation

A set of steps taken to achieve an outcome

A workflow is..

Iterations **Through experimentation**

A set of steps taken to achieve an outcome

Non-linear



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☆ Consider the creative outcome your Northstar

We can't make sense of a workflow by considering each of the tasks separately. We can only design a good experience in a flow.

☆ End-to-end experiences

Create Object

Edit Properties

Move in 3D

Change Settings

Post Processing

Preview

Render

☆ Beware of context shifts

Create Object

Edit Properties

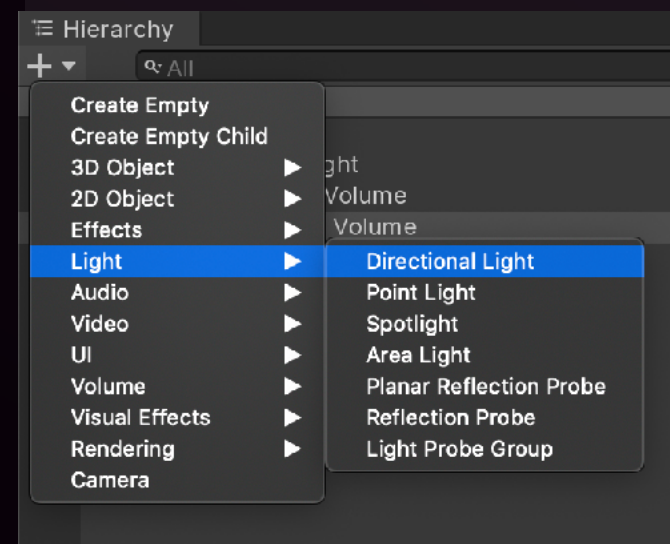
Move in 3D

Change Settings

Post Processing

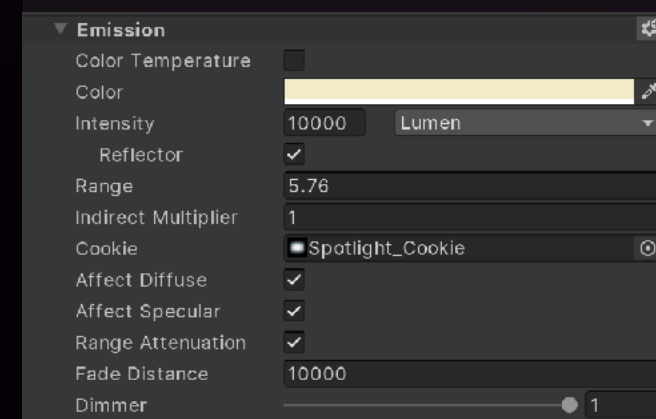
Preview

Render

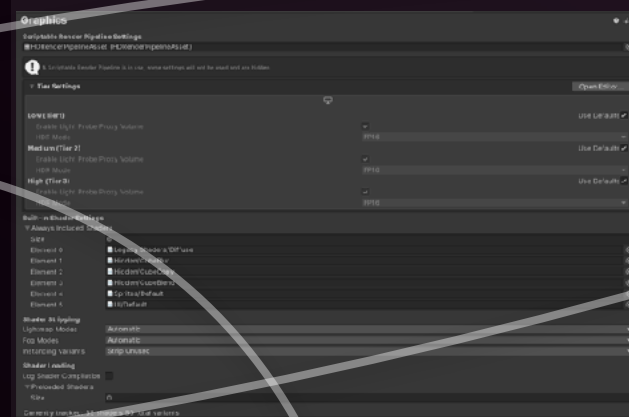


Create a Light

Set Luminosity



Move Light

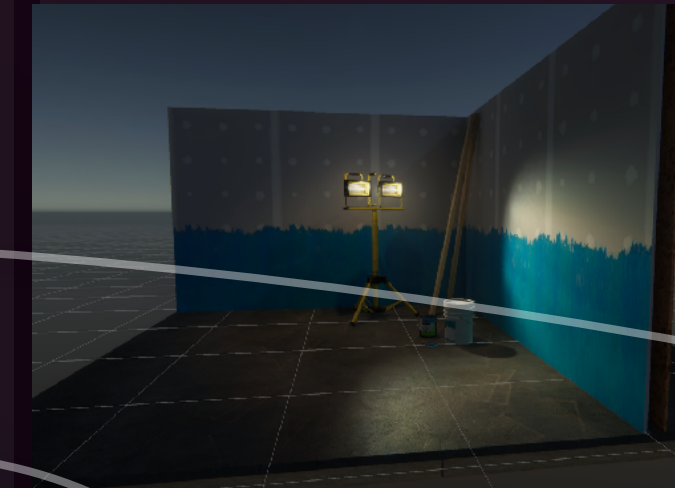


Adjust Quality

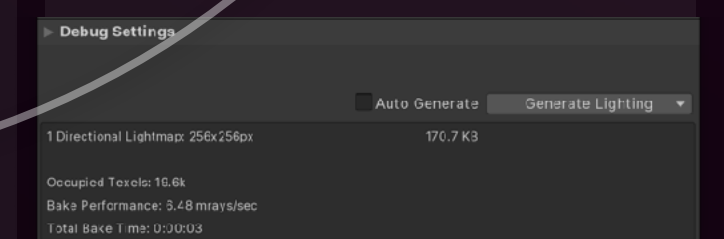
Set colour temperature



See Light



Bake



Designing for creative workflows

Flow

Keep people “in the zone”
by designing for context

Divergent Thinking

Make non-linear
exploration possible

Iteration

Make iteration fast,
focused and visual





Lighting | Scene | Realtime Lightmaps | Baked Lightmaps

Environment
Skybox Material: ScenariosSkyboxMat
Sun Source: None (Light)

Environment Lighting
Source: Skybox
Intensity Multiplier: 1

Environment Reflections
Source: Skybox
Resolution: 128
Compression: Auto
Intensity Multiplier: 1
Bounces: 1

Mixed Lighting
Baked Global Illumination:

Lightmapping Settings
Lightmapper: Progressive CPU
Auto Generate: Generate Lighting

0 Non-Directional Lightmaps | 0 B
Occupied Texels: 0.0 | No Lightmaps
Total Bake Time: 0:00:00

Game | Profiler | Animator | # Scene
Shaded | 2D | Gizmos | Q-All

Inspector: Buzzer Hover
Length: 1.967 | 30 FPS
Loop Time:
Loop Pose:
Cycle Offset: 0

Hierarchy: ExampleScene-Scenarios*
Main Camera
Directional Light
Environment
Scenarios
LockedDoor
Forcefield
EnemyBuzzer_Model
electric_buzzer_plasma
ForcefieldShield
GrassAndRockLayers
Toon
Spiderbot_Standard
Spiderbot_Toon_Texture
Spiderbot_Toon_Gradient
Toon Directional Light
Fish
EelDog

Build Settings

Unable to access Unity services. Please log in, or request membership to this project to use these services.

Scenes In Build

Add Open Scenes

Platform

- PC, Mac & Linux Standalone
- iOS
- tvOS
- Android
- Xbox One
- PS4
- WebGL
- Facebook

Player Settings...

Target Platform: Mac OS X
Server Build:
Development Build:
Autoconnect Profiler:
Script Debugging:
Scripts Only Build:

Compression Method: Default

Build | Build And Run

[Learn about Unity Cloud Build](#)

Timeline

ForcefieldShieldTimeline (ForcefieldShield)

ForcefieldShield (An)

Animation

Buzzer Hover (Read-Only) | Samples: 30

- Position
- Rotation
- Scale
- Animator.Curve: 1
- Renderer.Enabled: 1

Add Property

Dopesheet | Curves

0:00 (000.0%) Frame 0

Enable flow by inferring context from:

↖ Selection

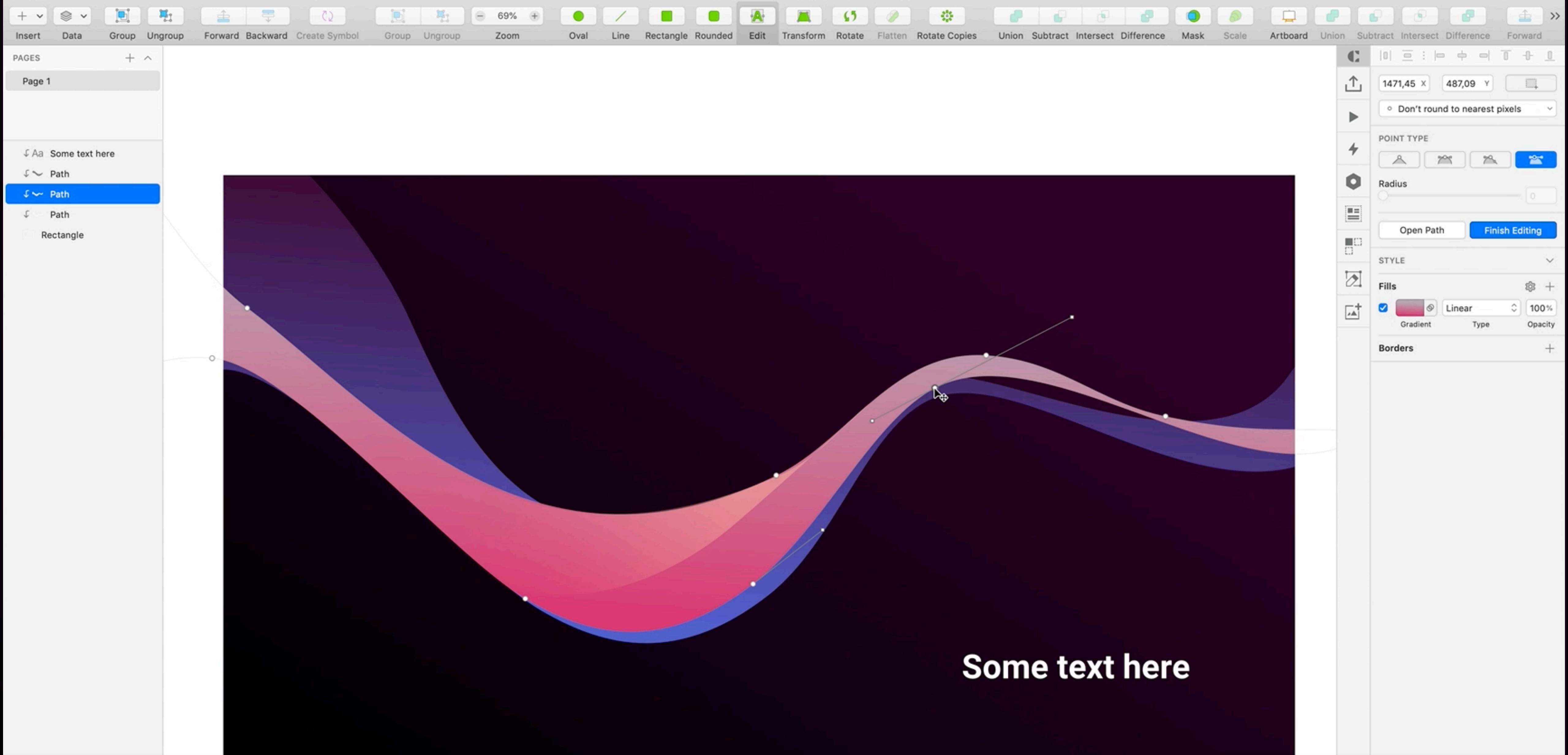
Inferring context from the selected object

✍ Tool

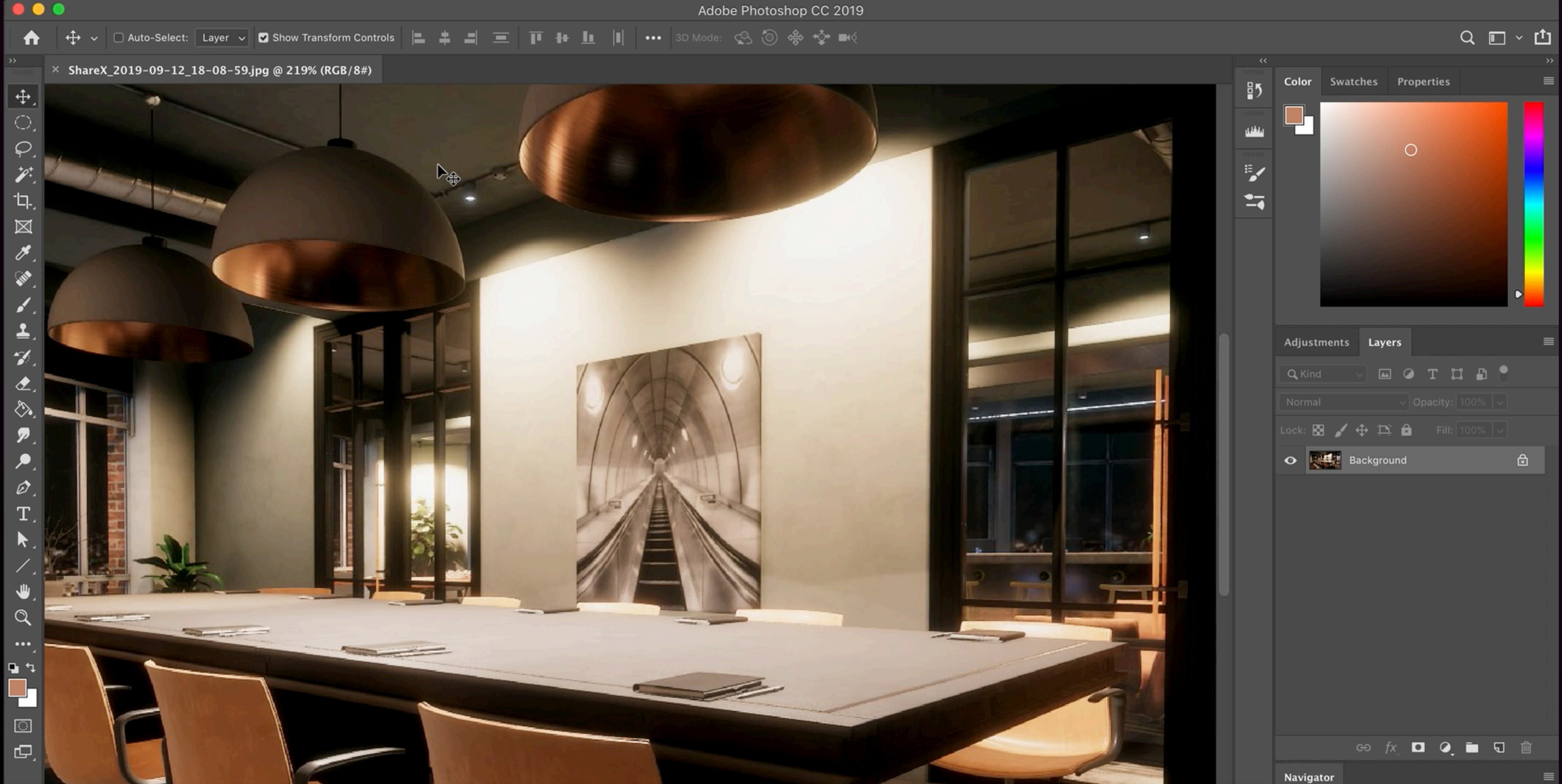
Inferring context from the selected tool

☰ Mode

Inferring context from the selected mode

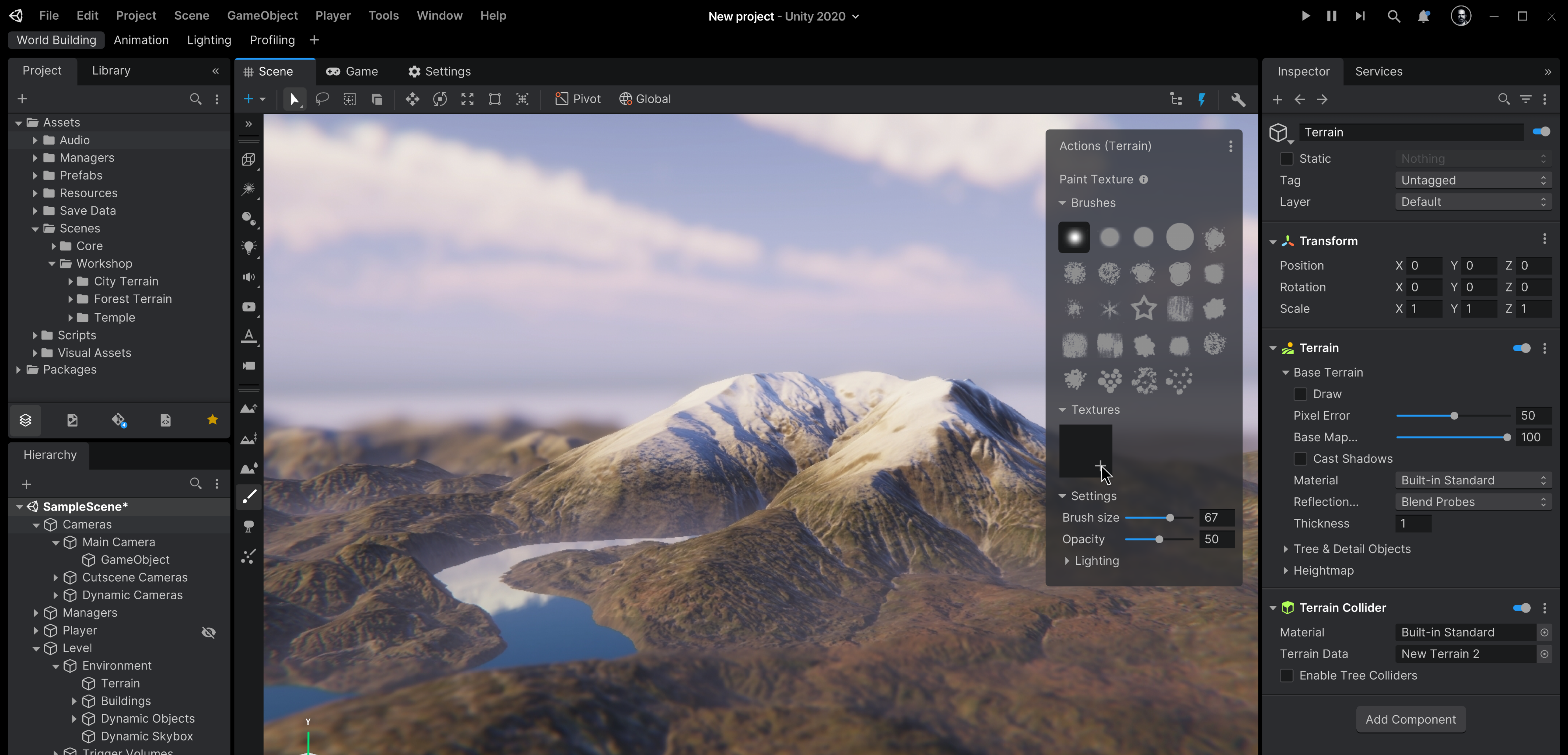


Inferring context from the selected object

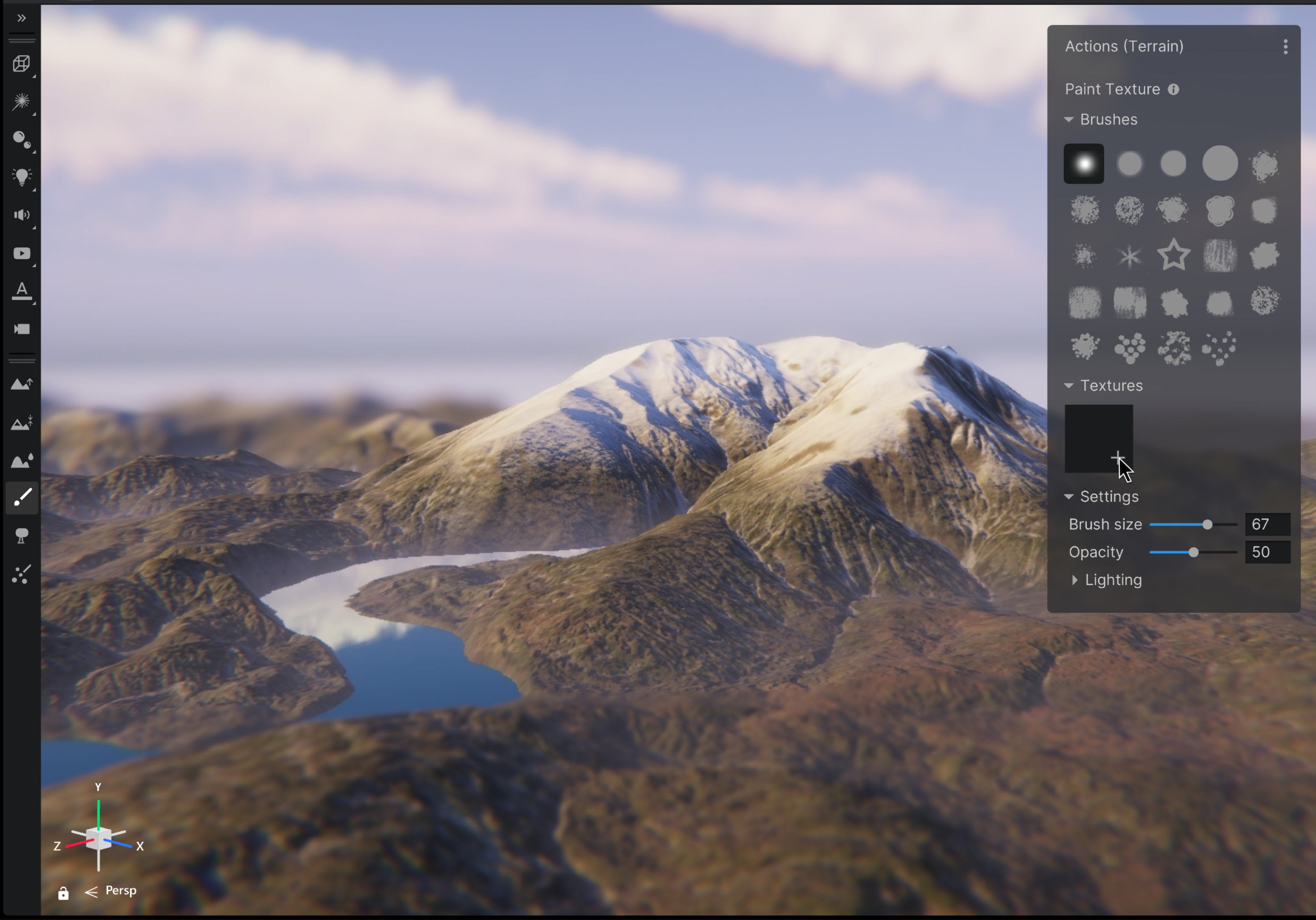


Flow

Inferring context from the selected tool



Inferring context from the selected mode



Actions (Terrain) ⋮

Paint Texture ⓘ

▼ Brushes

▼ Textures

▼ Settings

Brush size ▬ 67

Opacity ▬ 50

▶ Lighting



Terrain ⓘ

Static Nothing

Tag Untagged

Layer Default

▼ Transform ⋮

Position X 0 Y 0 Z 0

Rotation X 0 Y 0 Z 0

Scale X 1 Y 1 Z 1

▼ Terrain ⓘ

▼ Base Terrain

Draw

Pixel Error ▬ 50

Base Map... ▬ 100

Cast Shadows

Material Built-in Standard

Reflection... Blend Probes

Thickness 1

▶ Tree & Detail Objects

▶ Heightmap

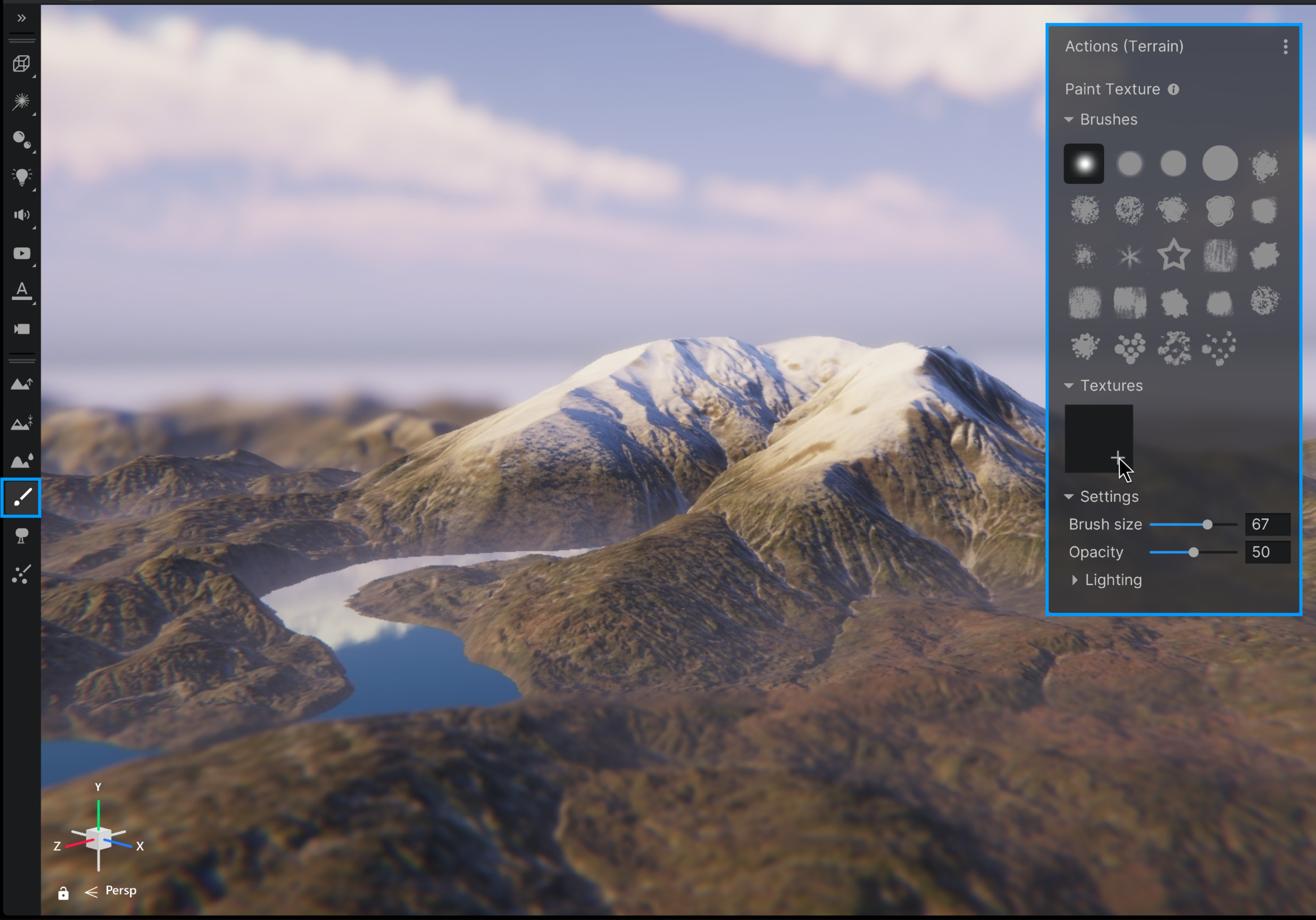
▼ Terrain Collider ⓘ

Material Built-in Standard

Terrain Data New Terrain 2

Enable Tree Colliders

Add Component



Actions (Terrain) ⋮

Paint Texture ⓘ

▼ Brushes

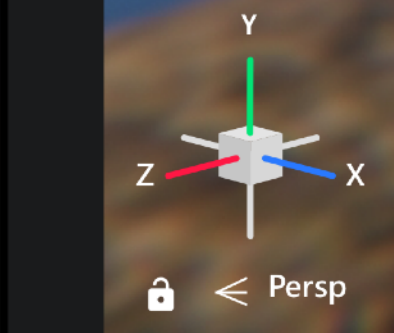
▼ Textures

▼ Settings

Brush size 67

Opacity 50

▶ Lighting



Terrain

Static Nothing

Tag Untagged

Layer Default

▼ Transform ⋮

Position X 0 Y 0 Z 0

Rotation X 0 Y 0 Z 0

Scale X 1 Y 1 Z 1

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Enable Tree Colliders

Add Component

Enable divergent thinking

Save and undo

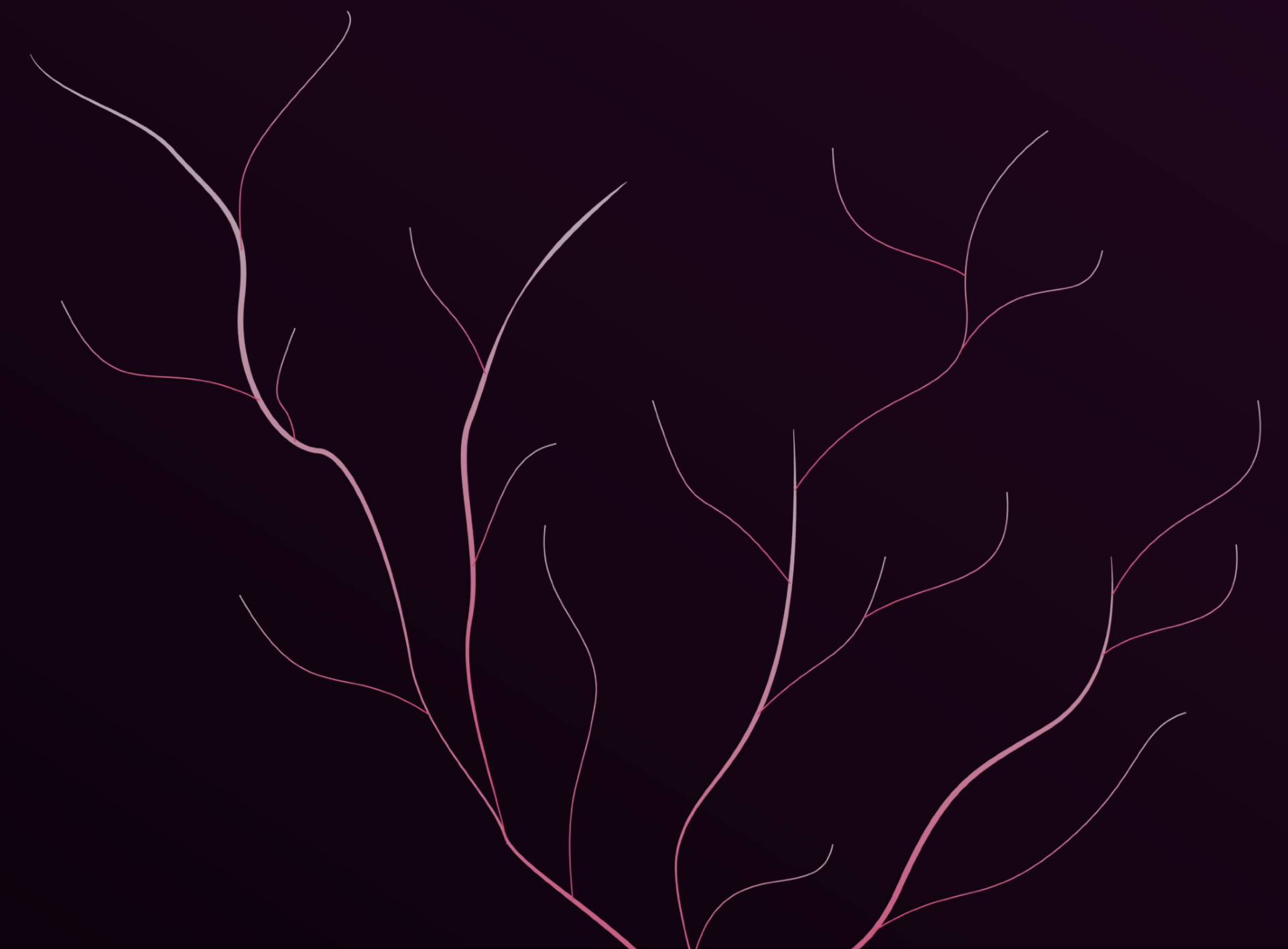
Stable software encourages people to experiment

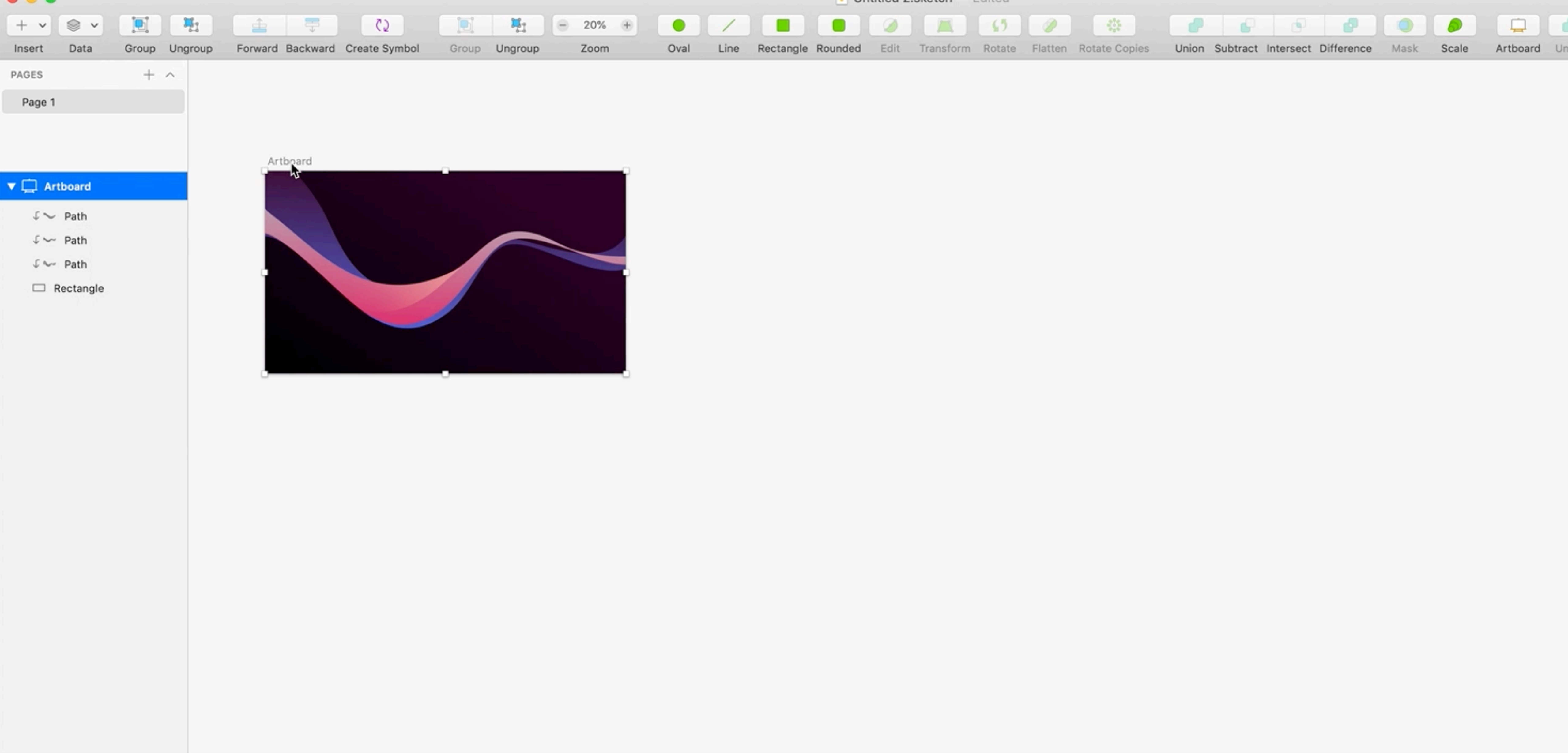
Compare

Give users easy ways to compare ideas

Branch

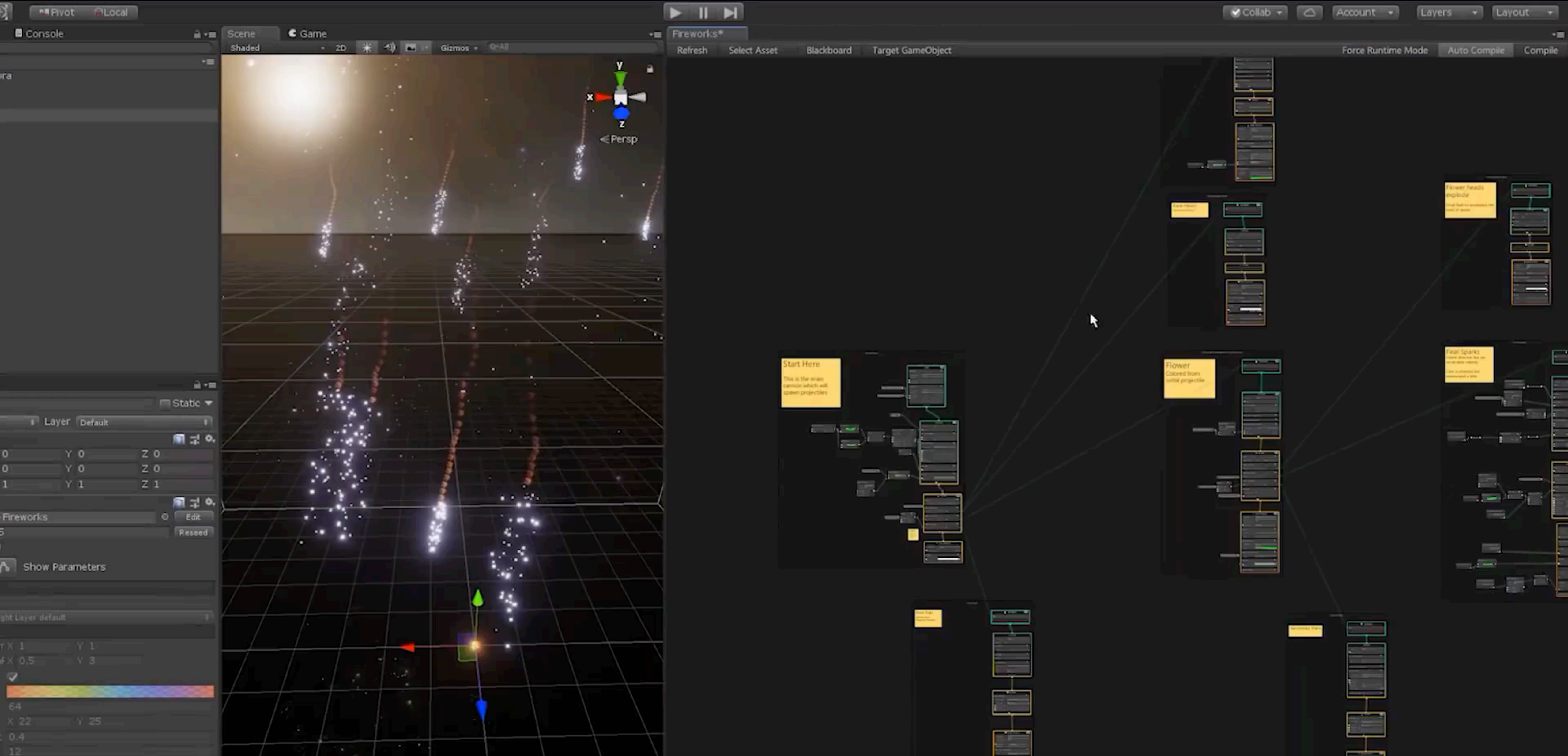
Allow people to branch off, make new ideas and backtrack





→ Divergent Thinking

Give users easy ways to compare ideas



↗ **Divergent Thinking**
Allow for branching

Support iteration

Show a Preview

What you see is what you get

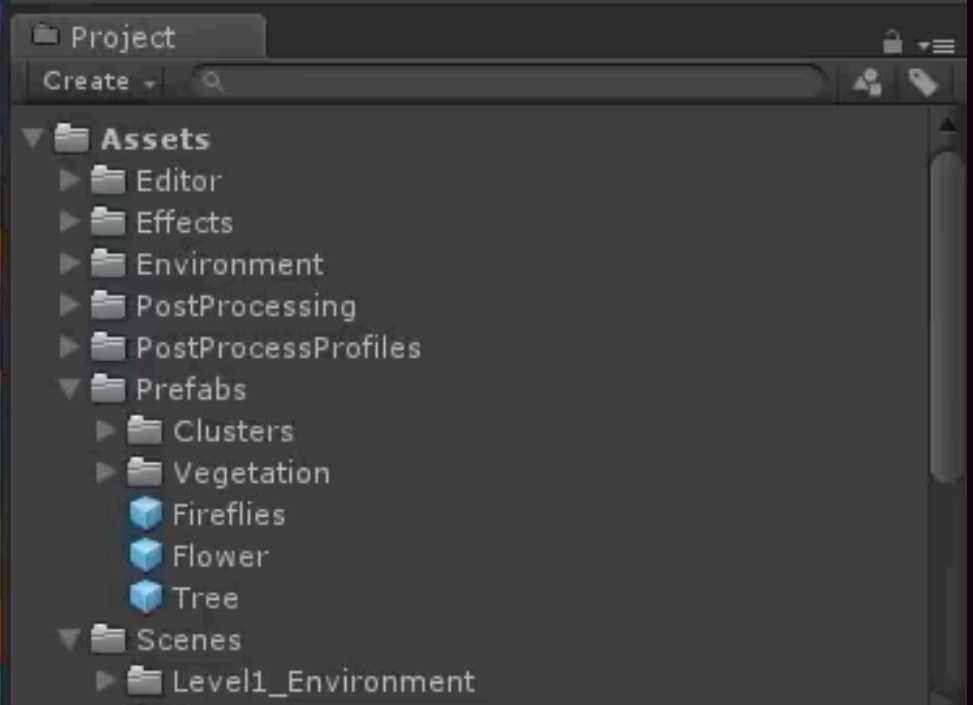
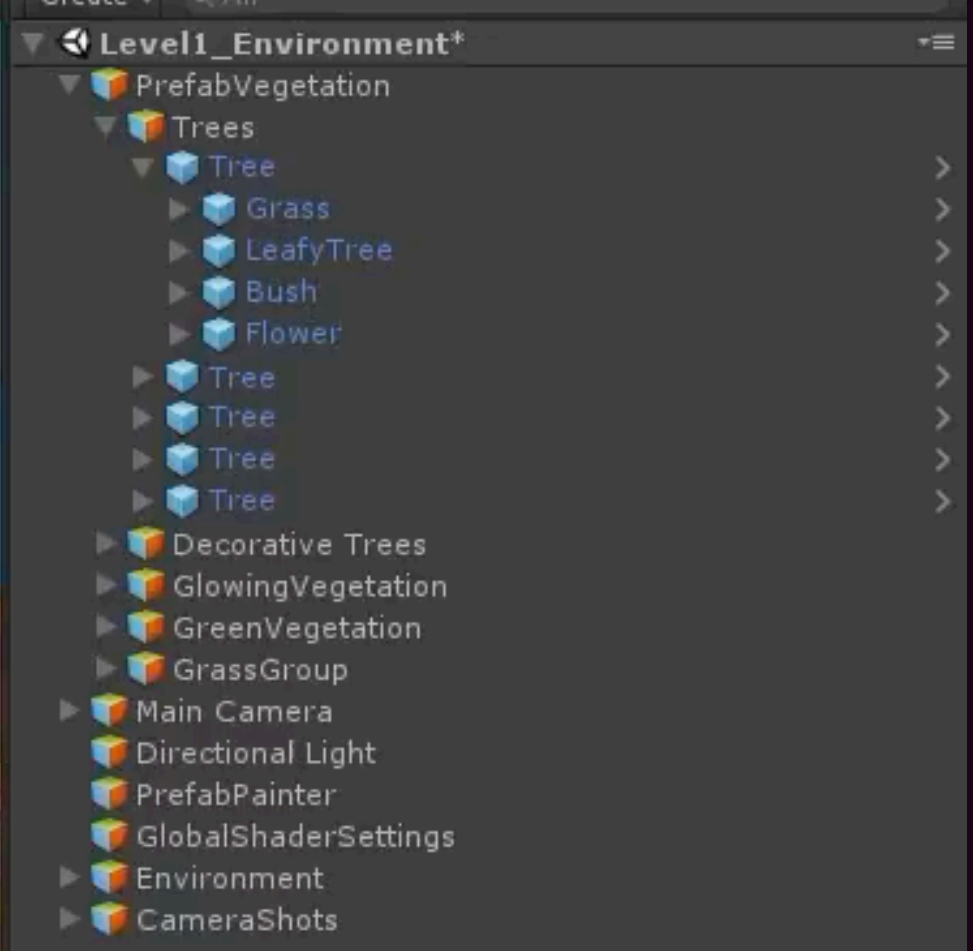
Reduce waiting time

Asynchronous uploading, rendering and other tricks

Focus

Provide spaces where people can have a singular focus





Iteration

Provide spaces where people can have a singular focus

A workflow is..

A workflow is..

Iterations
A set of steps taken to achieve an outcome
Through experimentation
Non-linear

A workflow is..

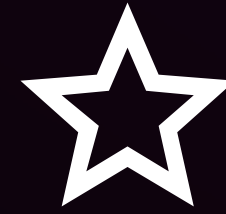
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To design for workflows..



Consider the creative outcome your Northstar

A workflow is..

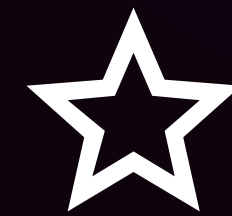
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To design for workflows..



Consider the creative outcome your Northstar

 **Flow**

Keep people in the zone by designing for context

 **Divergent Thinking**

Make non-linear exploration possible

 **Iteration**

Make iteration *fast, focused and visual*

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A misty forest scene with tall trees and a path leading into the distance. The text is overlaid in the center.

Every creative person wants to make the best articulation of their vision possible

A 3D wireframe character, resembling a stylized human figure, is positioned in the center of the frame. The character is rendered in a light brown or tan color, with a visible grid pattern on its body. It is holding a large, light blue rectangular object above its head with its right hand. The background is a dark, futuristic environment with various glowing elements, including a large green and blue data visualization on the right side, and several small, glowing icons and lines scattered throughout. The overall aesthetic is high-tech and digital.

Users are expecting increasingly higher standards for productivity

Creativity isn't only for artists.



Thank You

@nikolineUX

All visual effects made with Unity's Visual Effect Graph

<https://ole.unity.com/vfxgraphoverview>

Learn more

**Tales of Creativity and Play -
Tim Brown**

[https://www.ted.com/
talks/
tim_brown_on_creativity_an
d_play?language=en](https://www.ted.com/talks/tim_brown_on_creativity_and_play?language=en)

**Kinds of Seeing and their
Functions in Designing**

Design Studies, 13.2,
Schon and Wiggins

Evolving the Unity Editor UX

[https://blogs.unity3d.com/
2019/08/29/evolving-the-
unity-editor-ux/](https://blogs.unity3d.com/2019/08/29/evolving-the-unity-editor-ux/)

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