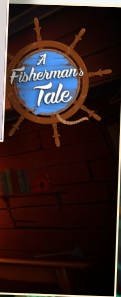


THE MAGIC OF DESIGNING LEVELS... IN VR

BALTHAZAR AUXIETRE
CREATIVE DIRECTOR
& CO - FOUNDER

INNER  SPACE

INTRO - INNERSPACE



INTRO - THE GAP



3DS MAX



WHY we should even bother using VR?



VIRTUAL REALITY DEVELOPERS CONFERENCE | July 19-20, 2021 | #GDC21

INTRO - THE GAP

WHAT is the gap between the real world and the virtual world?
Efficient way to start our 3d idea



- We see the world with depth but work all day long on flat screens...
- 3d Softwares are not that great to create spontaneously

INTRO - THE GAP

Why is it so ugly ?



Screen can be an obstacle

We should be working in the output format

Huh, should we use cardboard then ?





Where we're going we don't need cardboard...

INTRO - THE ADVENT OF NATIVE VR TOOLS

Then came the pen and paper of 3d...



Tilt Brush



Quill

INTRO - THE ADVENT OF NATIVE VR TOOLS

BUT

Could they be useful to make **games** with them ?

MASKMAKER



INTRO - THE 'MASKMAKER' CHALLENGE

- A large world with a great variety of levels
- Exploration was an essential part - Level design was the star of the show
- ▶ Had to be smart in how we designed these levels efficiently!



FINDING THE RIGHT TOOL- A BRIEF SURVEY



- **Tilt brush** - Great for a more casual use but limited in terms of “pro” features



- **Quill** - Great for making animated movies but difficult to do any other type of content.



- **Medium** - A good alternative to Zbrush but focused on sculpting only

And:



- **Unreal VR design tool** - felt promising as we use unreal but it proven pretty gimmicky.

FINDING THE RIGHT TOOL- A BRIEF SURVEY

We had to find a tool to :

- **Conceptualize and iterate rapidly**
- **Export scenes/models in Unreal**
- **Easy enough for anyone in the design team to jump in**

FINDING THE RIGHT ONE- A BRIEF SURVEY



... A “level designer tool ” !!!

DISCOVERING GRAVITY SKETCH

- The first tool to show what could be a professional modeling software, in VR
- Clearly made to be used as part of larger pipeline
- Has the right balance between affordance and complexity



WORKING WITH GRAVITY SKETCH

Started to use more and more the tool within the team for different purposes around level design,

Our Gravity Sketch production process step -by-step :

1. Level “ **FEEL** ”
2. Level “ **DESIGN** ”
3. Level “ **BUILD** ”

MASKMAKER

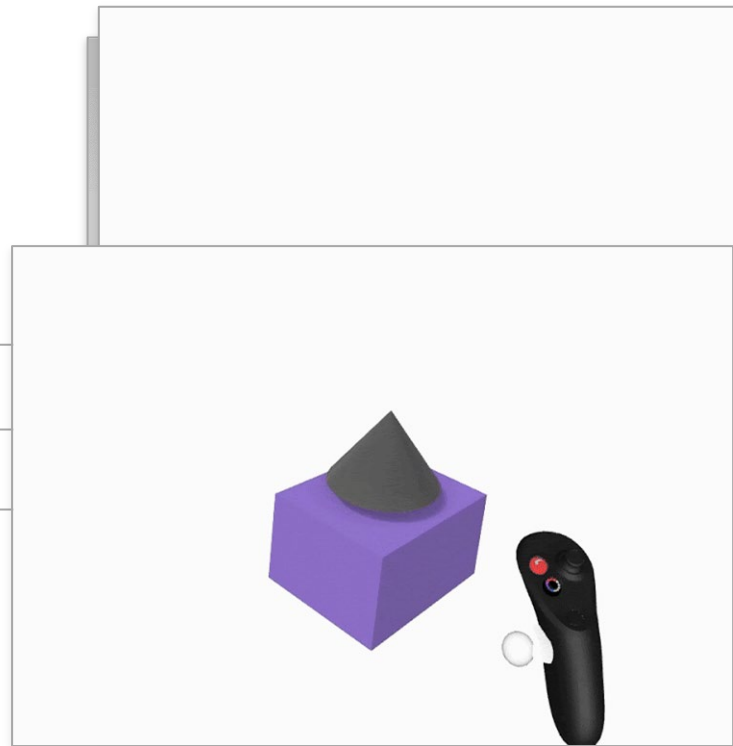
STEP 1 FEEL

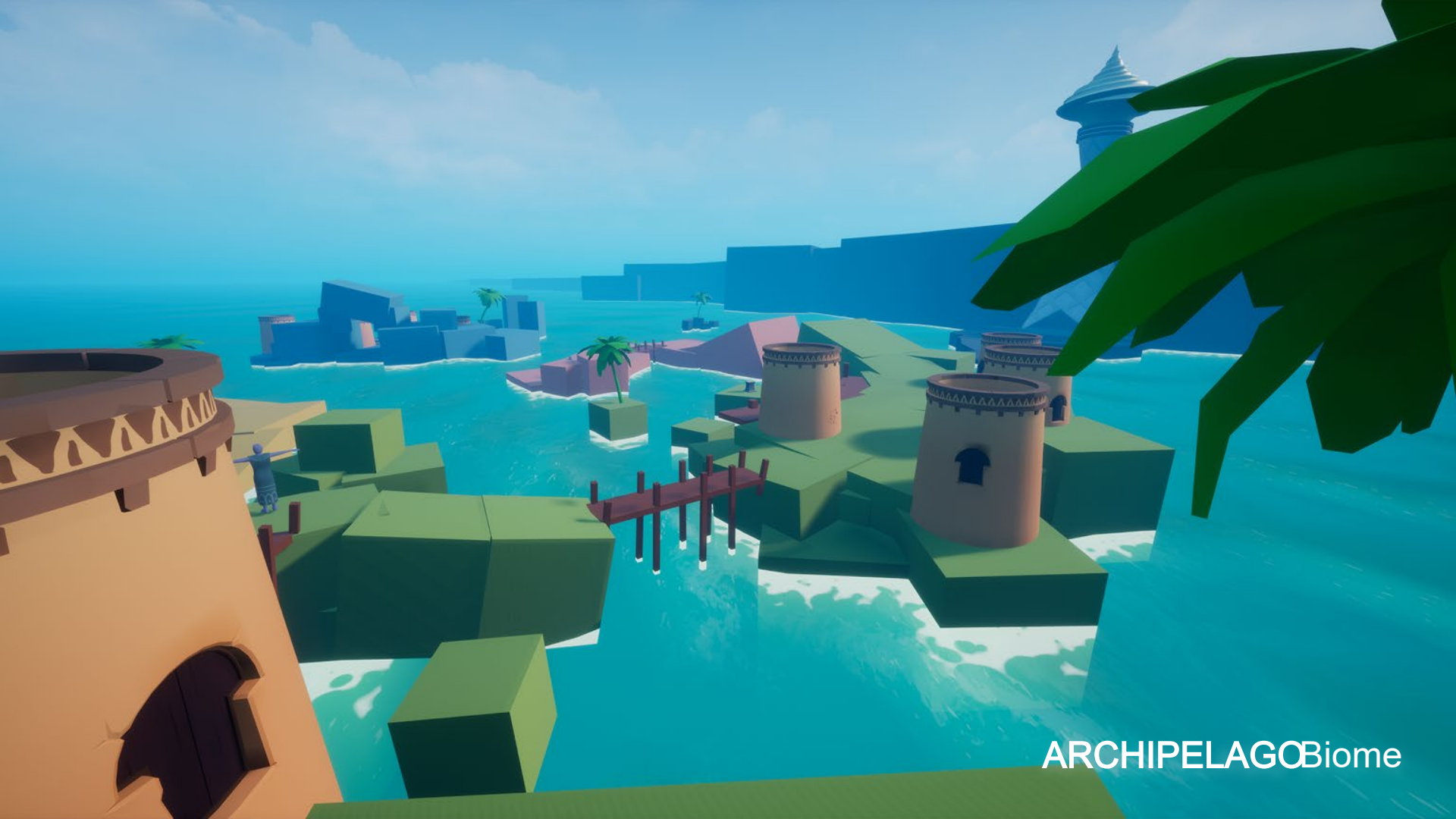
Production phase: Prototyping

Key team member: Art director / Concept artist

Finding the right “FEEL” from the space

- ▶ Gather references
- ▶ Model shapes roughly
- ▶ Play with scale

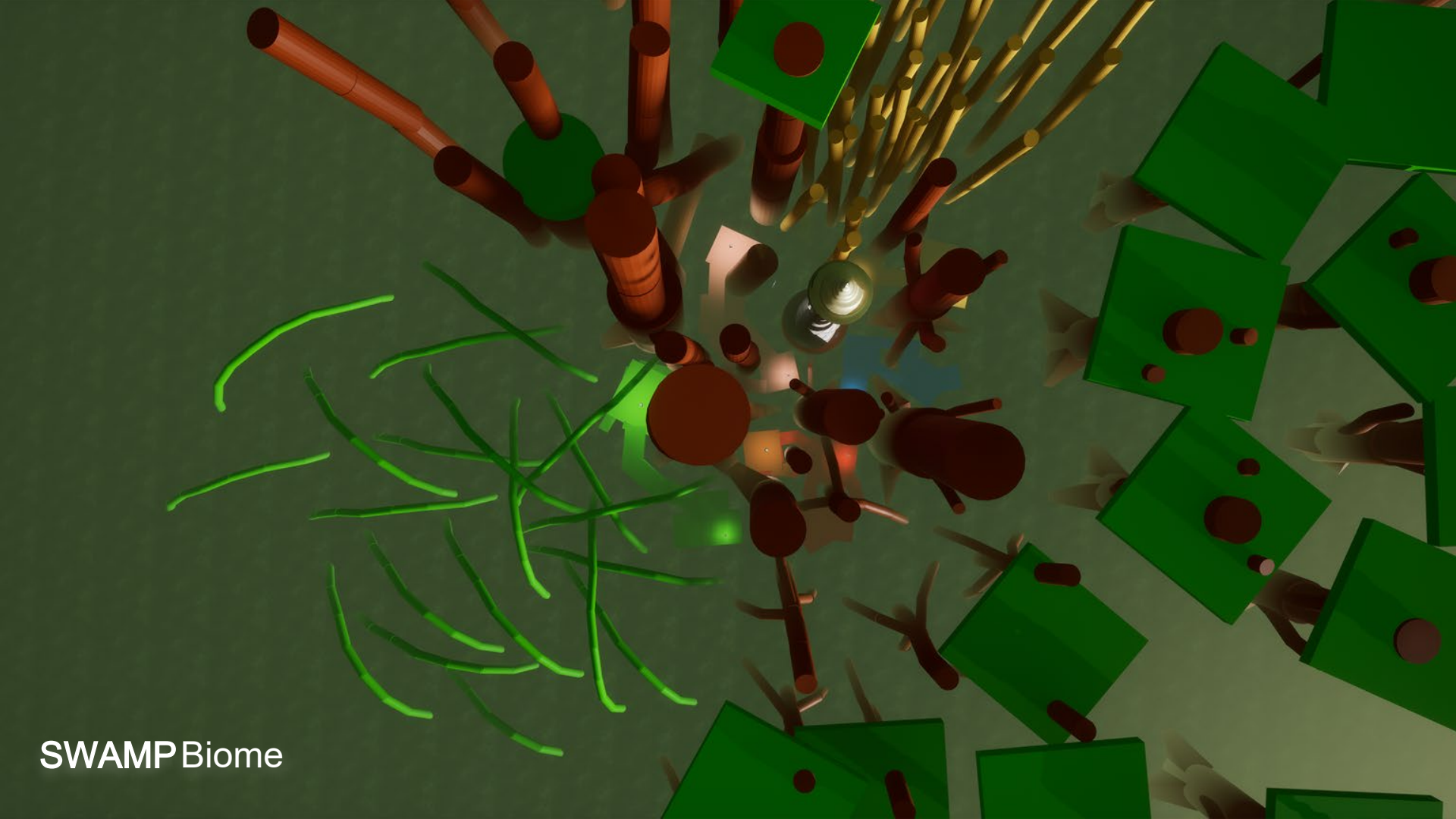




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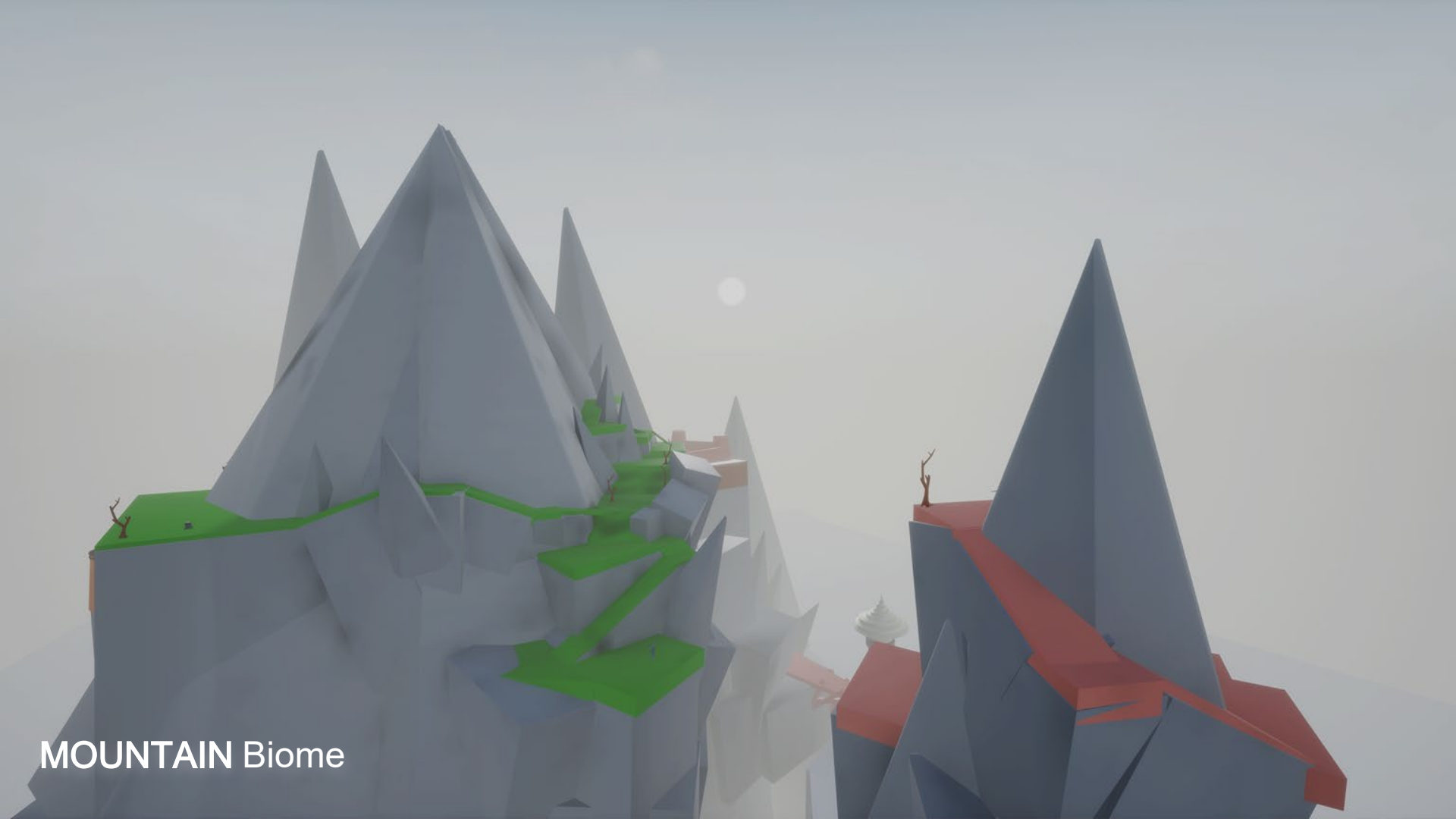
DESERTBiome



SWAMP Biome



FORESTBiome



MOUNTAIN Biome



MINE Biome

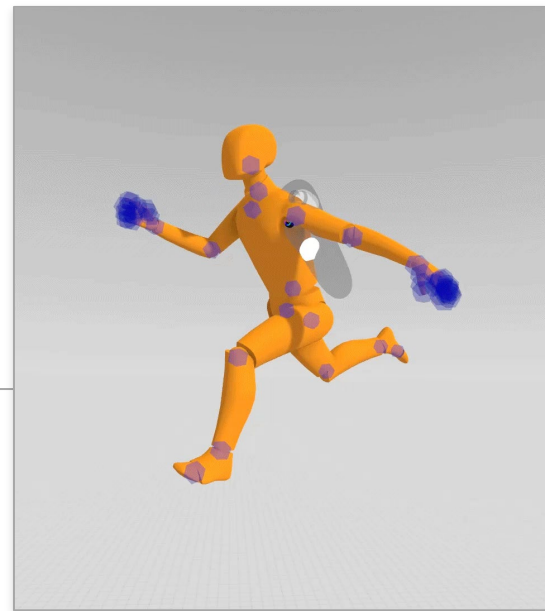
STEP 2- DESIGN

Production phase: Early-Alpha

Key team member: Level designer & Game designer

Start blocking each level & scope it properly

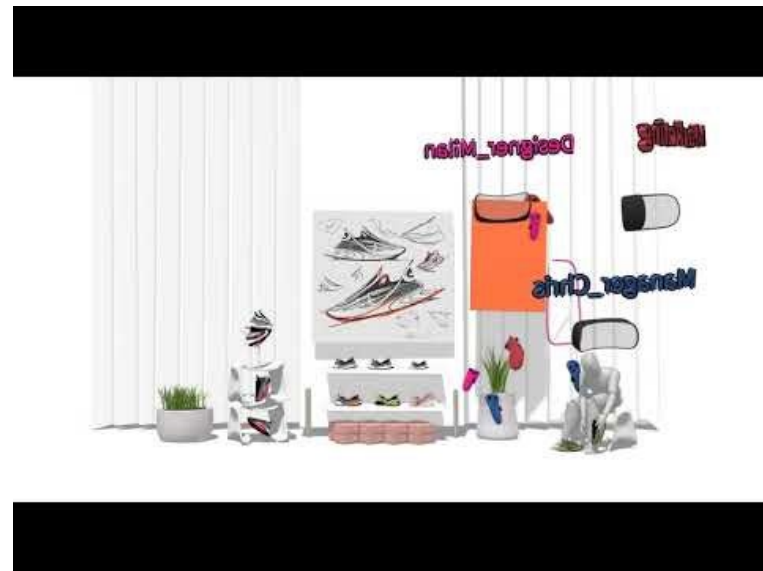
- ▶ Defining smaller “zones” with points of interest
- ▶ Placing characters, gameplay items...
- ▶ Roleplay your levels!
- ▶ Do all the above remotely but..**Collaboratively** !



STEP 2- DESIGN

VERY adapted to remote work & really great for :

- Brainstorm sessions - Feeling like kids in the same room!
- Review sessions (people can be outside VR also)





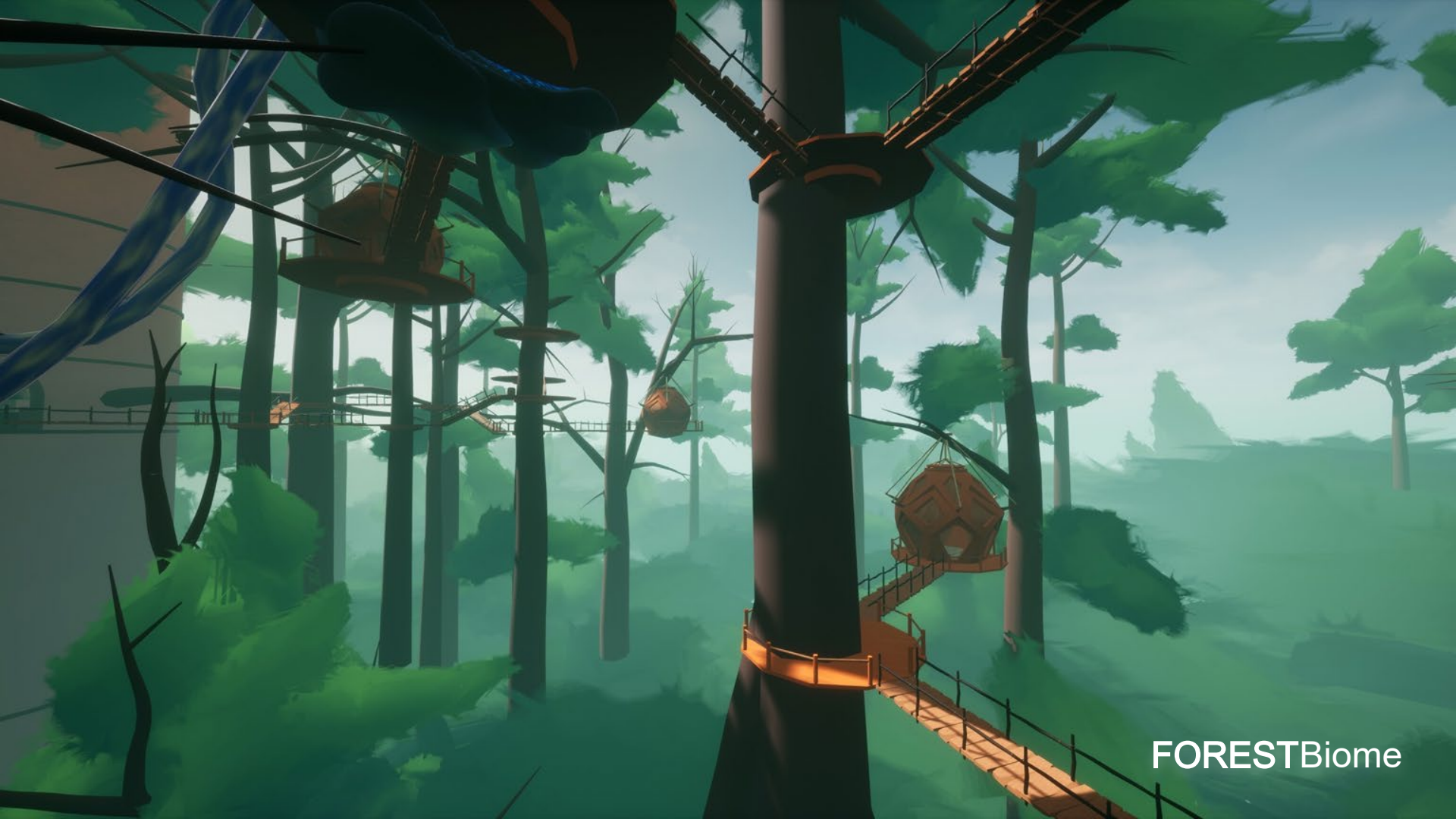
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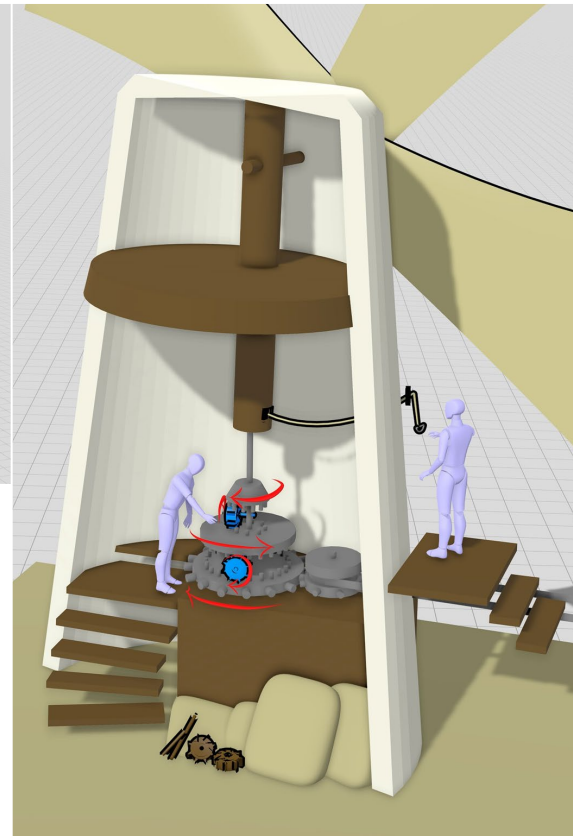
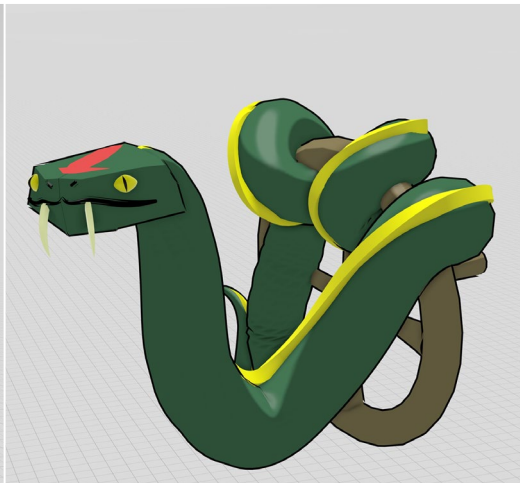
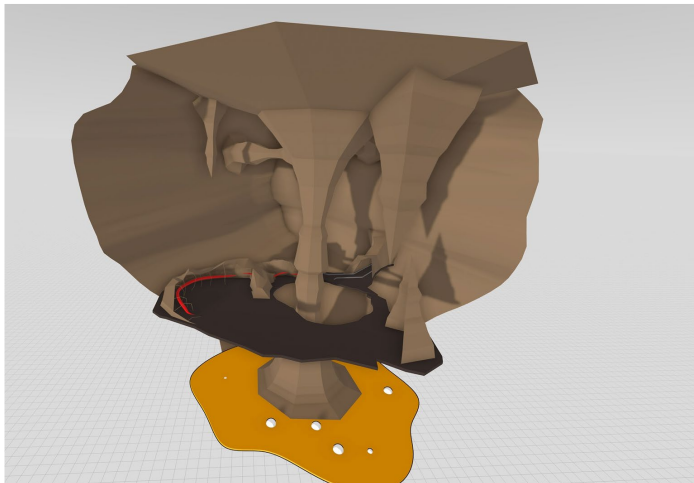


MOUNTAIN Biome



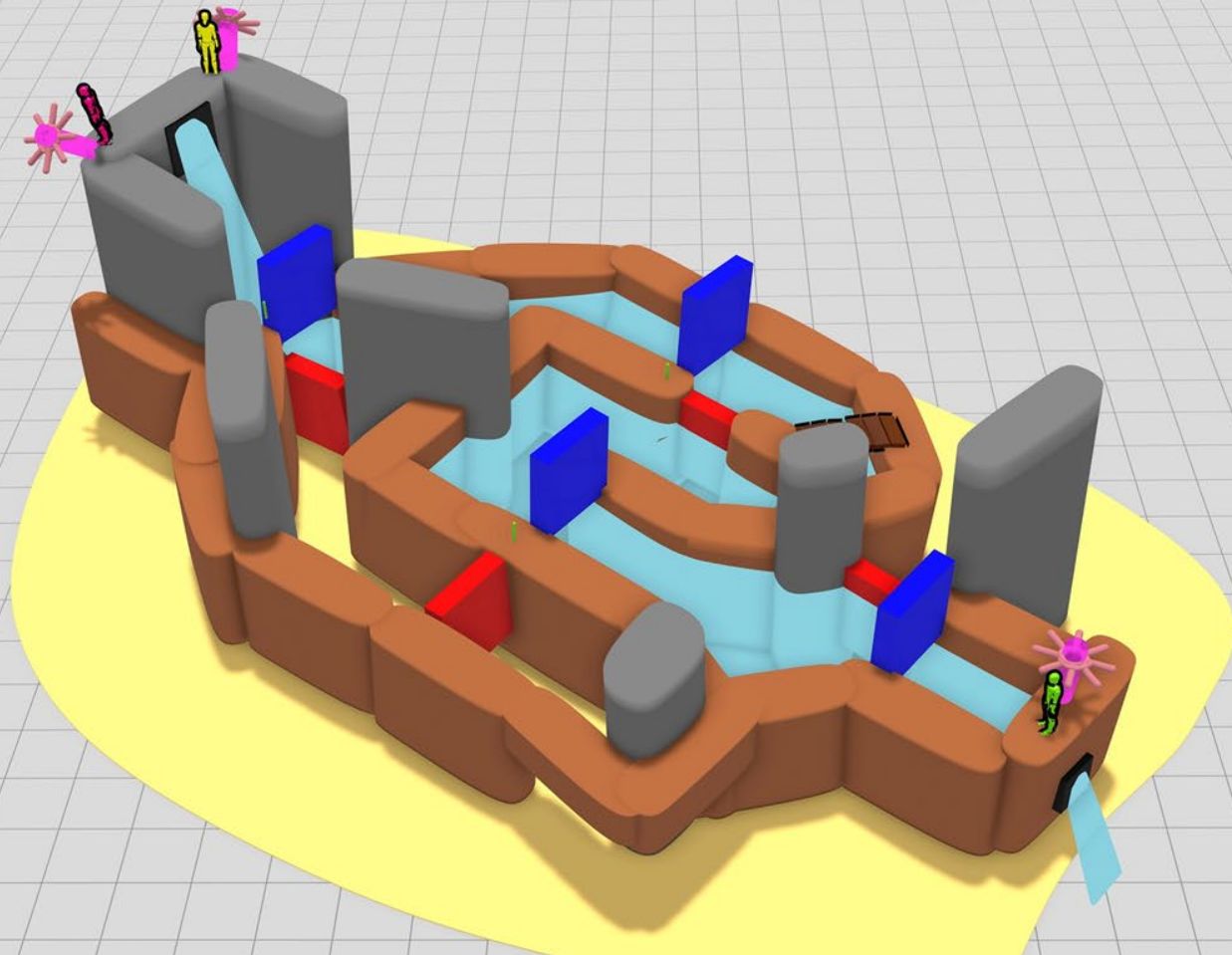
MINE Biome

Examples of models



Examples of models





STEP 3- BUILD

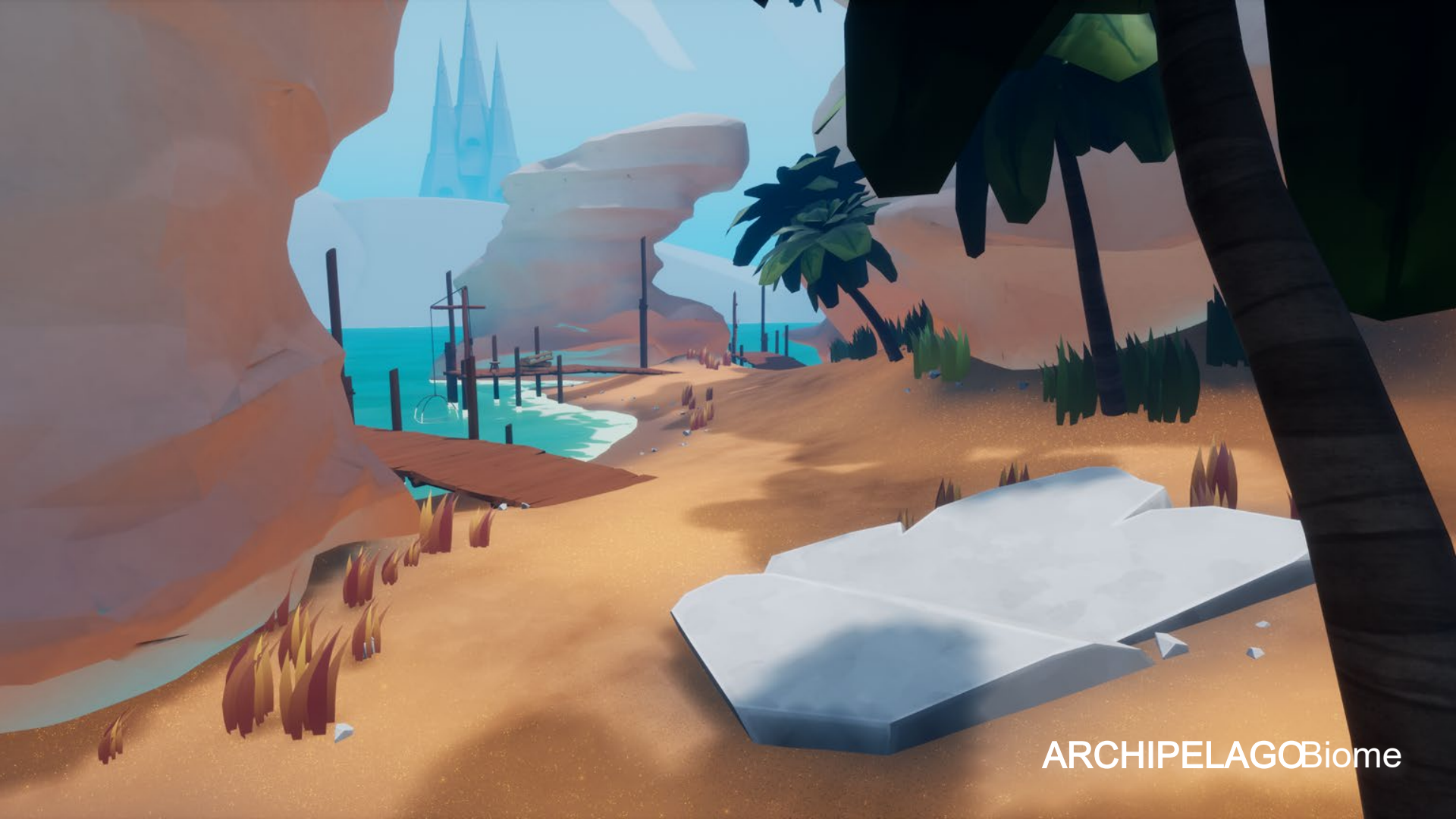
Production phase: Early-Beta

Key team member: Level designer & Game designer

Import your scenes in Unreal & make adjustments along the way

- ▶ More granularity
- ▶ Iterate, adjust and lock things asap
- ▶ Use of import/export tool
- ▶ Try to have clean models





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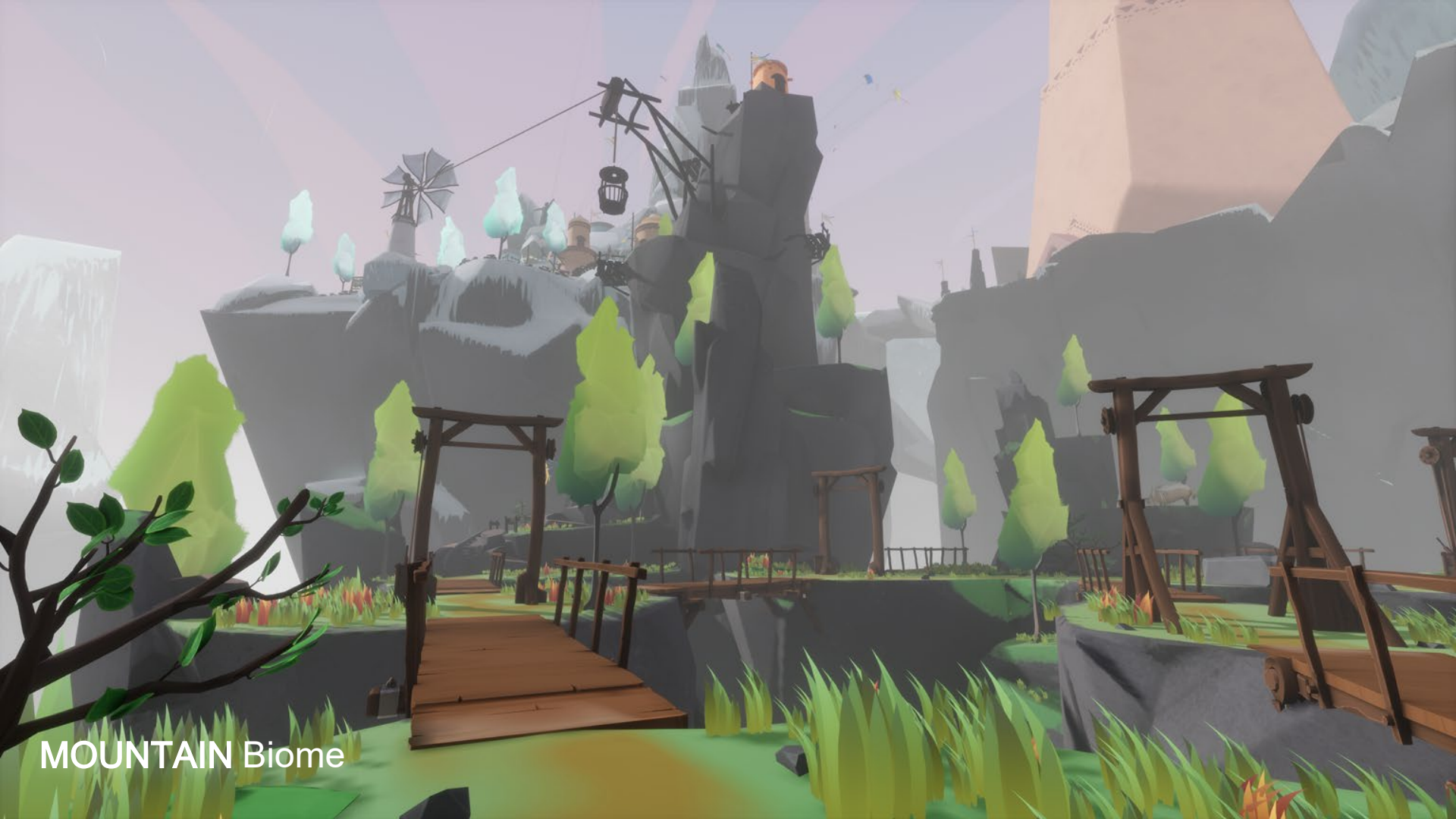




SWAMP Biome



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MOUNTAIN Biome



MINE Biome

A LOT OF 'PROS'

- Great tool for creativity, to focus
- Great for the level design
- Ergonomics : A joy to use
- Playing with scale, being there !
- Collaborative is magic
- Affordable and available on all platforms
- Solid 'pro' features

BUT ALSO SOME'CONS'

- Still a bit of a learning curve
- Hard to design straight hard surface objects (like architecture)
- Hard to get polished and optimized meshes (esp. for VR)
- Lighting & Material system is limited
- Hours in the headset can be tiresome, don't forget to get out IRL! :)

And other tools exist...

CONCLUSION- Opening up about the future

- Native tools have the power to disrupt our work methods
- Great for the creative process, designing 3d objects & level designing!
- We'll have more sophisticated VR native tools in the future
- BUT VR is not great for every step of the process





THANKS!

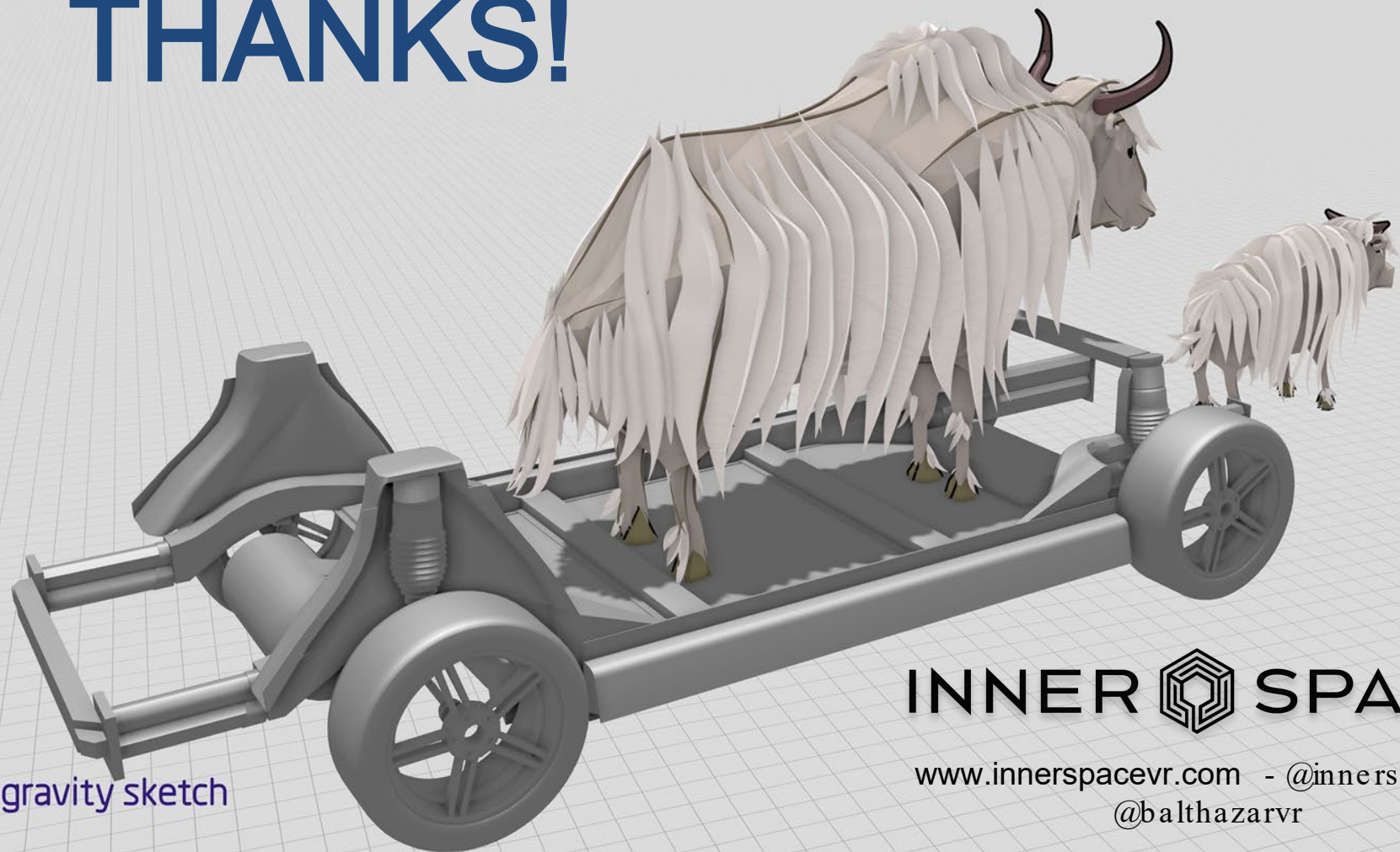
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gravity
sketch



THANKS!



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