

3D modelling and rendering: timelines and complexity

WHY ARE SOME 3D PROJECTS MORE COMPLEX THAN OTHERS?

Not all 3D projects require the same level of effort.

Simple product animations (such as rotating bottles, cans, phones, or packaging) are generally quicker to produce than people, animals, or characters.

Characters are significantly more complex because they require:

- Build the entire character in 3D, with correct proportions from all angles
- Make the body bend and move naturally
- Make the face smile, blink, and show expressions
- Make hair and clothing move realistically with believable textures
- Animate everything so it looks believable
- Spend much more time testing and refining the final result

Think about how many tiny muscles in your face move when you smile, laugh, frown, blink, or talk. A 3D artist has to recreate all of those movements digitally so the character looks natural rather than stiff or lifeless. A product only needs to exist. A character needs to act. It has to move, express emotion, and behave.

As a result, character-based 3D projects typically require more specialist skills, longer timelines, and larger budgets than product visualisation.

Why are some 3D projects more complex than others?



CHARACTERS

People, animals, mascots:

- Correct proportions at every angle
- A body that bends naturally, with joints and muscles
- A face that smiles and blinks
- Hair and cloth that move believably

It has to act, not just exist

PRODUCT

Bottles, cans, phones, packaging:

- 1x static shape = no moving parts
- 1x one material = one surface texture
- 360° rotation is enough

Quicker to produce; quicker to revise



A product only needs to exist;
A character needs to act

COUNT THE MUSCLES IN A SMILE

~20 facial muscles = a genuine smile

Every individual one gets rebuilt digitally, or the result looks stiff and lifeless

- Check what's being animated**
A product turning vs a face expressing
- Budget more time for characters**
Testing and refining takes real hours
- Expect specialist skill**
Character work is its own discipline
- Loop us in on the brief**
Early feasibility confirmation beats a late surprise

**A product simply exists;
character has to perform**

If a brief involves animated people, animals, or characters, please involve Creative Studio early so we can advise on feasibility, timelines, and production requirements before commitments are made.

WHY ARE 3D ANIMATION SO MUCH MORE COMPLEX TO BUILD AND CHANGE?

Unlike a flat design, a 3D scene is a complete virtual environment. Changing the position of an object often means reworking:

- Camera angles
- Lighting
- Shadows
- Reflections
- Object animations
- The overall composition

What looks like a small change can require rebuilding part of the scene so everything still looks natural.

WHY DO SOME 3D REVISIONS TAKE SO LONG?

Not all revisions are equal. Changing text or colours may be relatively quick.

However, **changing how objects move, interact, or appear in the scene often means rebuilding and reanimating** parts of the project rather than simply editing what already exists.

The more movement involved, the more work is usually required.

WHY CAN'T YOU JUST SPLIT UP OR DIVIDE THE 3D MODEL?

3D models aren't built like LEGO bricks.

Many models are created as a single object. If a client later wants part of that object to move independently (such as a bottle cap opening), we first need to rebuild the model into separate moving parts.

That may involve:

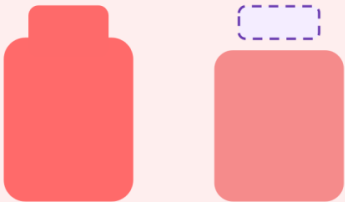
- Rebuilding the model
- Creating new surfaces and textures
- Creating new animations
- Re-rendering the entire scene

What sounds like a small change can sometimes become a significant rebuild.

ESKIMI CREATIVE STUDIO / CREATIVE QUALITY_3D MODELLING

Why you can't just “make the bottle cap pop off”

✗ HOW 3D OBJECTS ARE BUILT



One solid 3D shape
All parts are joined together, with no visible lines where they meet

For independent movement
The parts need to be separate 3D objects

✓ WHAT REBUILDING NEEDS

- 1 Split the object into separate, independent parts
- 2 Create new surfaces where the split now separates the individual parts
- 3 Texture those new surfaces to match each other
- 4 Animate the new, separate motion
- 5 Re-render the entire scene from scratch

3D models aren't built like LEGO bricks;
Most start as one single, solid piece



“SMALL ASK,” BIG SCOPE
A simple request to “pop the cap” on a bottle, for example, can mean rebuilding the model, textures, animation, and re-rendering the whole scene

*RENDERING: Calculating what the finished image looks like; EG. lighting, shadows, reflections, textures and every visible frame

 Flag moving parts up front

List what needs to move before modelling starts

 Not a LEGO kit

Models are fused solid objects, not split, separate parts

 Every new move re-renders

The whole scene, not just the part that changed

 Check before you promise

“Small” changes can be a significant rebuild

What sounds small can mean a full rebuild

WHY DO WATER, SMOKE, FIRE AND OTHER EFFECTS TAKE SO LONG?

Effects like water, steam, smoke, bubbles, splashes and fire aren't simply videos placed on top of an animation. The computer calculates how these effects move through the scene, frame by frame.

Think of it like drawing a puff of smoke...

...then drawing it **again**...

...and **again**...

...for every single frame of a 10-second animation.

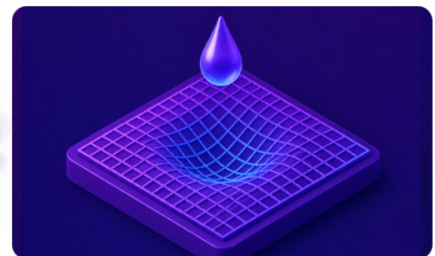
That's why these effects require considerably more processing time than simple object animation.

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Why do elements like smoke, fire, and water take so long to animate?



They aren't a video laid on top of the visuals;
Every single frame is simulated from scratch



EACH DROP, FLAME, AND WISP INDIVIDUALLY

- Sits naturally on the surface
- Catches and bends the light realistically
- Must respond correctly if the surface moves

 **Not a video overlay**
Every frame is a fresh simulation

 **Droplets add up fast**
Hundreds of individual physics calculations
*PHYSICS: Calculating how things move and react, EG: how liquid splashes, fabric folds, particles fall, or objects collide

 **Budget for render time**
Animations take much longer to calculate than simple movement

 **Flag effects early**
They can shift both timeline and budget

Simulated frame by frame, not filmed once

WHY DO WATER DROPS TAKE SO LONG?

A wet bottle isn't just a bottle with dots on it. Each individual droplet has to:

- Sit naturally on the curved surface
- Catch the light correctly
- Reflect its surroundings
- Look realistic from every viewing angle
- Move naturally as the object rotate

A single bottle can contain hundreds of droplets, each of which the computer must calculate separately.

WHY DOES RENDERING TAKE SO LONG?

Finishing the animation doesn't mean it's ready immediately. Once all changes are complete, **the computer still needs to calculate every frame of the final animation.**

Think of it like baking a cake. Mixing the ingredients doesn't make the cake ready - you still have to bake it. Rendering is that baking stage.

For every frame, the computer calculates:

- Lighting
- Shadows
- Reflections
- Transparency
- Materials
- Visual effects

A short animation may contain hundreds of frames, so **rendering alone can take several hours.**

WHY CAN'T RENDERING BE MADE FASTER?

Rendering is performed by the computer, rather than the artist. Once rendering begins, the computer must calculate every frame individually.

While we always optimise our scenes where possible, rendering time is largely determined by the complexity of the animation and cannot simply be sped up without reducing quality.

WHY DO MULTIPLE REVISION ROUNDS TAKE SO LONG IN 3D?

Unlike a presentation or Photoshop file, a 3D scene is built as one complete environment where everything works together.

Changing one element often affects many others. For example, moving an object may also require updates to:

- Camera angles
- Lighting
- Shadows
- Reflections
- Animations
- Scene composition

Once those changes are complete, **the entire animation usually needs to be rendered again** before a new preview can be shared.

For this reason, repeated revision rounds can have a significant impact on delivery timelines.

Think of it like building a house. It's much easier to decide where the windows go before the walls are built than to move them after the house is finished.

To keep projects moving efficiently, we ask clients to review versions carefully and [provide one consolidated round of feedback](#) wherever possible.

WHY ARE 3D PROJECTS MORE EXPENSIVE?

3D animation is a specialist craft. Projects often involve:

- 3D modelling
- Texturing
- Lighting
- Animation
- Visual effects
- Rendering
- Multiple rounds of testing and quality assurance

Complex animations can take many days to produce, which is why 3D projects typically have higher production costs and minimum media investments than standard banner production.

WHY CAN'T AI JUST DO THE 3D WORK FASTER?

AI is an [incredibly useful creative tool](#), but it isn't yet capable of replacing professional 3D production for most commercial advertising.

While AI can often generate an impressive-looking image or short video, it currently struggles with the things we need for real advertising campaigns, such as:

- Creating consistent results across multiple scenes
- Producing editable assets that can be revised later
- Making changes based on client feedback
- Recreating the same animation across multiple banner sizes and formats
- Maintaining accurate branding, products, and fine details

Advertising rarely ends with the first version. Clients often request copy changes, logo updates, different languages, new products, or revised animations. To make those changes, we need editable project files rather than a finished AI-generated video.

Like our cake analogy, think of it like asking AI to bake a cake. It might produce something that looks great in a photo, but if the client later asks for less sugar, a different flavour, or a larger cake, it's much easier if you still have the recipe than if all you have is the finished cake.

AI is already helping us speed up parts of our workflow where appropriate, and we continue to evaluate new tools as they mature. However, for high-quality, editable, production-ready advertising, skilled artists and traditional 3D workflows are still essential.

ESKIMI CREATIVE STUDIO / CREATIVE QUALITY_AI

Doesn't AI just build the whole campaign?

✗ WHAT AI PROVIDES

One image or one video:

1

- Flat image
- One size
- One language
- Not editable

✓ WHAT A CAMPAIGN ACTUALLY NEEDS

Every tile is hand built:

300x600

728x90

320x100

320x150

320x480

300x250

- Platform specs met **per placement**
- **Editable** for later reverts, sizes and localisations / languages
- QA on every single asset, including **embedded tracking and functionality** per banner
- We reposition, resize and export every format at **full quality**

One prompt makes one asset;
A campaign is everything that has to happen after it



"AI MADE IT, SO IT SHOULD BE CHEAP"

The cost isn't just the image - it's the people, software, adaptation, QA and revisions around it

AI speeds up parts of the process; it doesn't remove the production work

🔍 Scope the full set

List sizes, formats and markets up front

🔍 Check before promising

One line to Creative Studio saves a re-pitch, or an unhappy client

📁 Assets still needed

Editable files, logos, fonts, brand rules

🕒 Budget time for adaptation

The volume drives the time, not the prompt

One prompt is a starting point, not a delivery

Revision #3

Created 16 September 2026 13:10:47 by Lee Geldenhuys

Updated 21 September 2026 13:20:39 by Lee Geldenhuys