CHAOSGROUP

IKEA Communications AB

Every year, **200 million copies** of the IKEA catalogue are printed and **over 2 billion people** visit the IKEA website.

Each catalogue contains **over 9,000 products** and the website includes multiple variations of each product.

Every IKEA product needs a picture – and that's a lot of pictures! So IKEA turned to **V-Ray** and 3D to render **thousands of photorealistic images**.

Before the images are created for the catalogue and website, a small team of 3D artists helps product developers prototype and visualize ideas.

JOHAN GUSTAVSSON, Project leader:

"My department is very early in the process. We help the developers create images, animations, and illustrations early in the product development process. So our work rarely meets the customer. It's about getting developers further in their process in a short amount of time. So, we help them in their entire process. In our day to day job we receive mostly solid work files from the developers. We take them into 3ds Max and convert them, perhaps edit the mesh a bit, apply materials from our model bank or recreate old materials from samples.

We make a lot of images for them to look at with different materials and different geometry, so that they can make decisions from these images. If we need a photographer to look at our images so we can make them better, we have them here. If we have need a new script, we have the developers here that could help us with that. So there's a lot of competence. And it's really nice to have since you will develop yourself when talking to them. It's really good."

To ensure the 3D product models look as realistic as possible, the materials department creates high resolution images of the textures, fabrics and surfaces.

JOHANNES FORSEN, 3D Materials Technician:

> We are at the very start of the pipeline. So when a article model is ordered by IOS (Ikea of Sweden), the 3D coordinator starts looking at the article and which materials are needed for this. And if we haven't made them already, they order new materials from us and we make them."

SARAH BOLMSTEN, 3D Materials Technician:

> The material pipeline goes like this. We have a sample, a product that needs a material, so we study it and see how it's made. If it's a fabric - how many threads, how the weave looks. And then we need to have the diffuse color, it needs to be perfectly correct. So we print out and compare to the sample and sometimes we need to take a photograph - we have the black studio downstairs. We're trying to create materials, so we can use the textures for other articles. We are creating all the different maps in Photoshop and then we put everything together in 3ds Max. And we're using V-ray to render all the nodes and the values and we need to look for the reflections, and the gloss and everything needs to be really accurate to get the realistic look. Now I'm working on a quilt cover. It's mainly the same color everywhere, but when you look at it, it seems to be striped. So it's striped, but it's the same color because there's the difference between the stripes, it's another weave. And the effect is a bit different. I need to mix a lot in V-Ray shading to get the results because it's all about the reflection, and the gloss and the fresnel. So, it's funny."

Next, artists use the texture captured by the materials team to create realistic computer generated 3D models.

FANNY HAGBERG, 3D Artist:

> I get a brief from an image producer. The image producer has to contact the people from IOS (Ikea of Sweden). So I get a brief with hopefully a drawing and an article number and what should I do with this image, what kind of image it is. Is it a main product picture, a quality picture or is it a functional picture? We have three different pictures. So, when I know what to do I start to do my job. And sometimes if it's a bigger room set or we need propping for example, like products that aren't Ikea products. It could be plants or other things. Then I need an interior designer and sometimes I can be more creative. And then when I'm done with my image I send it to a retoucher and that's the final part of the chain. People often don't see the difference between our photos and our 3d images. And that's the best feedback we can get."

Lighting and composition are also handled by 3D artists.

MAGNUS OLSSON. 3D Artist:

"I've been here for four years. I started as a retoucher and then I moved over to a 3D artist. For me starting as a retoucher, who didn't really have the 3D background, I could create good pictures pretty early, because I had the image background, but not the technical background. But it didn't stop me. So I think V-Ray really helped with that. My responsibility is the lighting and composition, so basically what the photographer has in the studio. We decorate the scene, set the light and set the cameras, in collaboration with the interior designer and art director. I took the opportunity and went down to the studio as soon as I could. I've been working in the studio as a photographer as well, so I kept doing it, so I've almost had two years as a studio photographer in between working as a 3D artist. And then working with both 3D, retouch and photography everything fits together. I mean, what I learned in the studio makes me a better 3D artist and what I learned in 3D it makes me a better retoucher. Working with all those parts really made me grow and not only in one profession but in all of them."

MARTIN ENTHED, IKEA Digital Lab Manager, Development and Operations IT Manager:

A very nice thing is that we internally, when we talk images, we are very passionate and we try to make them look really, really, really good. From a technical standpoint if I would have seen the images we do today, five years ago, I wouldn't think this was possible. I think we have an image quality that I haven't seen anywhere else. I'm really proud of the whole team, the artists and everyone all the way through the pipeline who make this happen."

"V-Ray helps create really good photorealistic images, to the point that people can't tell the difference between real photos and 3D images, which is exactly what we aim for." FANNY HAGBERG, 3D Artist
"I love V-Ray. The lighting is perfect. You can achieve so much with HDRI, V-Ray Sky and V-Ray Sun. It's a fantastic tool." FREDERIK KARLSSON, 3D Artist

"I've been using V-Ray for quite some time. It's solid software that we can trust in production. When we use it, we know what final outcome we can expect – and that means a lot." JOHN GUSTAVSSON, Project Leader
"V-Ray is really easy to get into. You can focus on the creative part without having to worry about the technical things happening in the background. You can get technical, but you don't have to." MAGNUS OLSSON, 3D Artist