

# TOMORROW'S WORLD TODAY



*The 3D design takeover*

# INTRODUCTION

3D design is on the crest of a wave, driven by accelerating demand for immersive experiences and a pursuit of next generation skills and technologies. The International Data Corporation (IDC) estimates that the combined augmented reality (AR) and virtual reality (VR) markets are growing at an annual rate of 54% and are expected to be worth \$72.8bn by 2024.

In this near-future reality, 3D is the natural next stage in design.

Everything is to play for as we strive to reach the top of the 3D design adoption and innovation curve but before we get there, there are obstacles to overcome. Based on a research study from The Drum and Adobe with 200+ 3D design professionals across Europe, we identified three defining trends that shed light on the current 3D design landscape:

## Accelerating demand

While there's a strong appetite for 3D and curiosity surrounding it, organisations are struggling to keep up with growing demand, constrained by time, budget and access to talent.

## Pursuit of next generation skills

Individuals are clearly passionate about the 3D design industry, and keen to seek professional development and career progression.

## Tech is the leveller

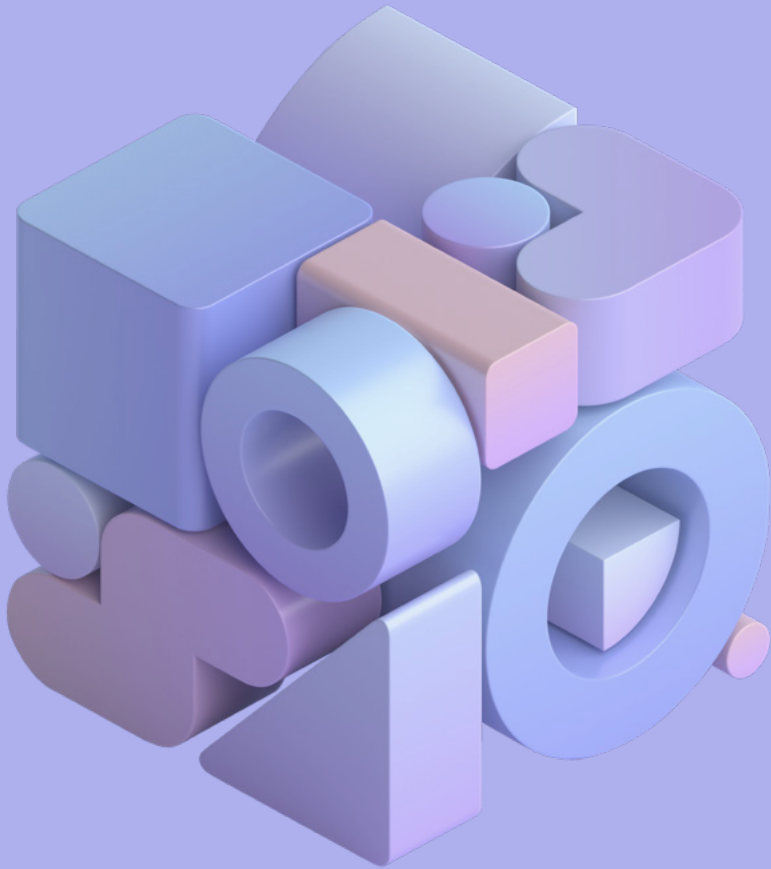
Next-generation tools and software are deemed the top factor to improve the 3D industry, but standardisation and process alignment aren't there yet.

To help brands and creative agencies in tomorrow's world, this report explores the drivers of demand for 3D design, the challenges ahead and solutions that can support designers as they navigate the 3D realm.



**“In this near-future reality, 3D is the natural next stage in design.”**

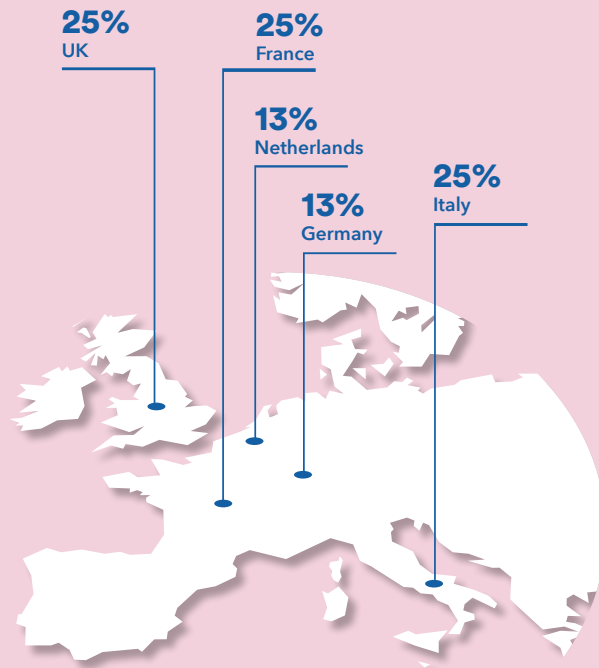
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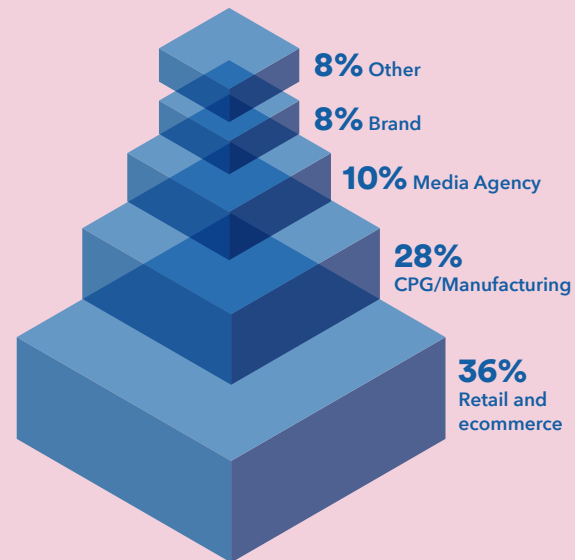
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# DEMOGRAPHICS

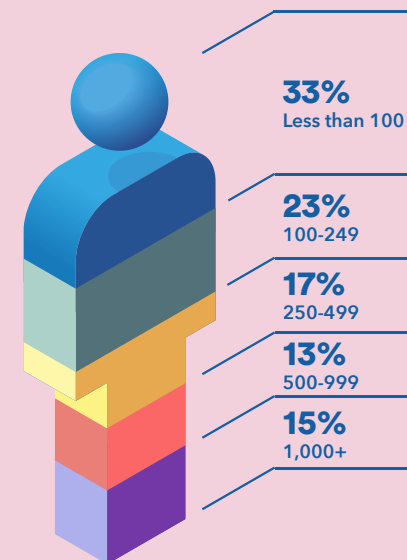
Country in which  
respondent works



Company's primary  
business



Company size  
(number of employees)



# ON YOUR MARKS

## The state of 3D design

### A NEW DIMENSION

We live in a world today where there is no avoiding 3D. Everywhere we look - whether it's up at the immersive billboards breaking out of buildings or down at the digital avatars on the screen in our pocket - there's a new perspective to how we visualise and perceive the world and experiences within it. With this comes a new opportunity for designers; one that gives them complete freedom to dream, imagine and create without bounds.

A growing demand for more immersive digital experiences has accelerated the adoption of 3D; the proliferation of new channels and environments - from AR to VR, gaming and the metaverse - requiring new creative assets. With these shifts, technology has matured and there's greater accessibility and availability of technology, tools and platforms to bring stories and experiences to life.

"Twenty years ago, 3D was a primitive, niche and expensive technology. Now, computer

graphics have reached a maturity that allows us to visualise realistic imagery quicker than ever before," says Alex Hindle, Senior 3D and Spatial Designer at global creative agency LOVE.

"It's become an indispensable skill in many sectors, from product design to entertainment, engineering to fashion - all using 3D design tools to recreate reality and leverage this to fully conceive ideas before going into production."

Not only is 3D now front and centre, through the democratisation of software/tools, and advancements in hardware, but a small team of 3D artists can also now output what a visual effects (VFX) company would struggle with 15 years ago, to the same or higher fidelity and finish, says Thomas Valente, Founder and Executive Creative Director of Inertia Studios: "It has the ability to push the boundaries of design, CGI and modern visual aesthetics, allowing artists to craft highly engaging and scroll-stopping content."

33%

of designers say  
3D is the next step  
in their natural  
career progression



## CREATIVE DESIRE

With this demand comes a greater need for a 3D design skillset to service the workload – giving designers, who might have only worked in 2D previously, the chance to upskill themselves and add different dimensions to what they are creating.

Our research shows that 33% of designers already working in the 3D space felt it was a natural career progression for them, with their core motivations being their passion for 3D design (46%), wanting to learn and develop new skills (38%) and a desire to work in a more creative industry (31%).

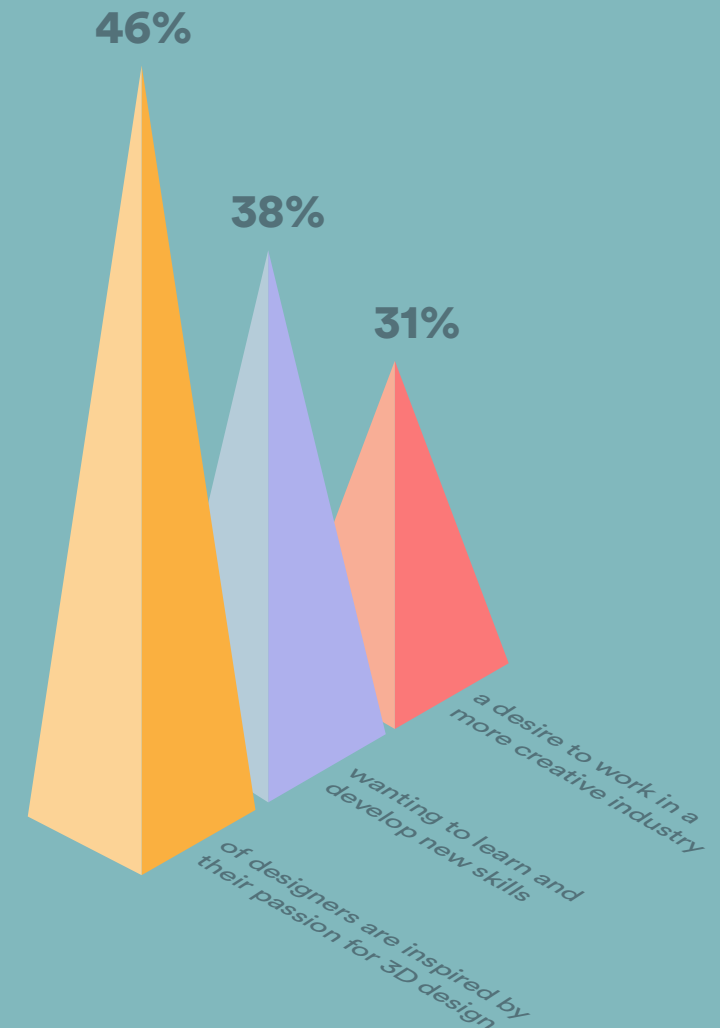
“Whether it’s 3D animation, spatial or even product design, working in 3D has allowed me to work across a lot of different disciplines,” says Hindle. “Working with designers who have such a mix in backgrounds and expertise is

a great learning experience and has influenced me as a 3D artist. To have developed an eye for a different 3D specialism, and helping to shape the workflow, shows how adaptable you can (and must) be when you work in 3D.”

“The ability of 3D design to totally transform an idea means our skills are desired in all circumstances – we can collaborate with architects, machine design, packaging, branding, photorealistic scenes, and the list goes on,” adds Hannah Leadbeater, 3D and Motion Designer, B2B tech marketing agency Fox. “Almost every industry is screaming out for 3D designers – and if they’re not already, they should be – as all types of 3D, whether that be stills, modelling or animation, will truly bring an idea to life.”

**“The ability of 3D design to totally transform an idea means our skills are desired in all circumstances – we can collaborate with architects, machine design, packaging, branding, photorealistic scenes, and the list goes on.”**

### Top 3 reasons for working in 3D design



In recent years, there's been a shift in people's perception towards 3D as it moves away from simply being a graphical communication tool to being recognised as an art form.

"It's a medium that allows us to build the impossible, bend reality in unimaginable ways, and explore new design aesthetics that carry both narrative and emotive qualities," says Valente. "Working in 3D, we are incorporating a vast array of other skills, from anatomy and ergonomics, architecture and interiors, lighting and photography, costume and fashion design, and creative problem solving, into a single frame or animated CGI sequence."

With such high demand for 3D designers across multiple industries, the opportunity for 2D designers to upskill and evolve to 3D can open a lot of doors for them.

## CROSS-TEAM COLLABORATION

3D is only set to get bigger. The global 3D technology market is expected to reach \$703.4bn by 2030 from \$171.4bn in 2020, according to Allied Market Research.

As brands continue to push the limits of what's possible, there's a greater need for cross-team collaboration and tools that can simplify the workflow - especially when there are multiple stakeholders and perspectives involved in a project.

"The design and creative process go hand in hand, but the design and production process also have to be super connected," says Alex Wilson, Executive Creative Director at brand experience agency Amplify. "The 3D designer is the important linchpin between creative and production as to how we take something that could be an impossible pie-in-the-sky idea, something that may not be completely bound by the laws of reality,

to push that boundary through design, visualise and realise it, and then ensure that it's possible to fabricate and make real."

At the same time, "a well-executed prototype is a great tool to take stakeholders through the experience, encouraging them to participate in the development process," says Martin Hargreaves, Creative Director for Environmental Design and Strategy at ad agency Wolff Olins. "This can have a galvanising effect and builds client confidence. The more we can digitally place people in environments, the easier it will be to get them to collaborate earlier and influence a solution."

The demand is there, the market is moving, and the stage is set. 3D is the natural next step in the creative evolution, and it's much closer than you might think.

**"3D is the natural next step in the creative evolution, and it's much closer than you might think."**

# MUDDY WATERS

## Overcoming the challenges of 3D

### THE HURDLES TO 3D DESIGN

While there's clearly a strong passion and desire for more 3D design work from the designers we spoke to, the education system isn't keeping up with the current need for 3D designers, particularly in the product, fashion and automotive design industries. Our research shows that time (55%) and budget (60%) constraints are the biggest challenges facing 3D projects.

"We have to be smart when it comes to iterating on a design, pre-empting potential issues and questions as much as possible - otherwise you get bottlenecks in the process," says Hindle. The main suspect, he says, being render time which often gives an "eye-watering estimate. All eyes are on you to deliver, and nobody likes to keep a client waiting."

Designers are working on much tighter timelines too - what used to take weeks and months can now sometimes take days, says Ashley Randolph, Design Director, brand and design agency Landor & Fitch. "Our timelines are so fast and there's so much pressure because of the speed at which the output can be made. It

would be interesting to see flex on the front end of projects."

When 3D projects are inextricably reliant on computing infrastructure, software platforms and the availability of having the right specialist talent, "triangulating these prerequisites successfully doesn't always keep up with imagination, creative, budget and timelines," says Rainer Usselman, co-founder of creative tech production agency Happy Finish.

One in five UK survey respondents say a lack of suitable tools is their biggest challenge. Globally, however, the challenges vary by company size, with access to talent and industry knowledge seen as bigger inhibitors at larger firms with more than 350 employees than at smaller firms.

For companies, shifting to 3D design workflows requires careful planning and hiring key elements to spearhead the shift and train the rest of the team. But once that's done, the benefits are huge: saving time and money, and gaining flexibility and creativity.

### The biggest challenges facing 3D design projects

**55%**  
Time

**60%**  
Budget



## MANAGING EXPECTATIONS

Education is another obstacle to success, signalling the importance of setting expectations of what 3D design can do and where it can take you, says Kelly Vero, editor-in-chief of Metacrunch, a news outlet dedicated to web3 and the metaverse: "Projects have their limitations and it's not always about budget, it's often about technology. It's our job as designers to inspire the desire of moving mountains in our thinking as well as our deliverables."

This lack of understanding can be risky when it comes to the delivery, adds Leadbeater. "If people are aware of the different stages of a 3D design, it makes a project much easier, however, if they aren't it becomes riskier in

terms of delivery," she says. "There have been times when a model has been altered right at the end of a project, just before delivery. This isn't ideal at the best of times but with 3D design it means the model itself needs a complete re-do, taking the process right back to the start. It then needs to go through all the various other stages before it's ready to be rendered, significantly delaying the project live date."

High learning curves and complex tools can only slow down the process even further and often inhibit projects from meeting their potential. To alleviate these issues, designers say they are turning to tools that are more accessible and with lower barriers to entry.

**"It's our job as designers to inspire the desire of moving mountains in our thinking as well as our deliverables."**

## SOFTWARE AS THE SAVIOUR

Indeed, cutting edge tech/software (31%) is deemed the number one factor to improve the industry for future 3D designers.

Designers say that momentum is moving away from offline rendering and towards real-time, in-engine workflows - the overall direction heading towards greater ease of use, higher fidelity, better real-time performance and more access to rich asset library ecosystems.

"While it's always great to collaborate in person, tools that allow us to screen share work and move things around in real-time can massively help the design process," says Wilson.

"We currently use offline rendering to visualise our projects," adds Hindle. "If, after [it's rendered] you spot something you want to change or improve, that's another wait. With real-time, you eliminate that wait, allowing freedom to iterate designs on the fly."

The ability to work in real-time gives designers a much better sense of how their final design will look and feel, allowing them to better communicate scale and the big picture. Hindle adds: "Improving on the immersive aspects and removing technology barriers can only improve how we generate and share ideas with clients and fellow designers alike."

The democratisation of 3D means that designers have better access to tools that might have only been available to VFX houses and film production studios. And by cutting through culture, it makes 3D "less of a dark art and less intimidating" for designers to use tools to realise what's in their head and put it on a screen, says Wilson.

# 31%

of respondents say that 'cutting edge tech and software' is the #1 factor that will improve the industry for future 3D designers.

## A FLUID PROCESS

But there's still a lack of standardisation in the 3D industry. Our findings suggest that technology alignment (43%) is the 3D design process most likely to benefit from greater standardisation, followed by software licensing (30%) and training/qualifications (27%).

"When 3D software first came about, everything worked in isolation. You would have magic workarounds that would get you from an export from one program so that you could work with the same content in another, but now they're all starting to speak to each other a little bit better," says Randolph.

"Regardless of what process you're in, you're still able to visualise, which is so important for clients these days - and that sort of communication between programs

and the way they work together is key to communicate the beauty behind the ideas when clients are able to see a fully realised version of it."

A good workflow is one that is prepared to be altered, shifted and iterated. And when you have multiple teams working on projects, it's important to have flexibility that gives people the freedom to change their mind and be able to implement changes as they happen - allowing the ability to make decisions faster and rectify mistakes as quickly and efficiently as possible.

While there are still some hurdles to cross, it's clear that there's an opportunity for innovation in the software market to help break down these barriers.

The top three processes that will benefit from greater 3D design standardisation

**Technology alignment**

**Training and qualifications**

**Software licensing**

43%

27%

30%

# FEELING ZEN

## Applications of 3D design

With an understanding of the hard skills and infrastructure required to overcome the challenges around 3D design, our research highlights creativity (65%), perseverance (48%) and patience (44%) as critical soft skills for 3D designers to be able to succeed.

Randolph tells us that if she could go back and share a key learning with anyone starting out in a 3D career, it would be to "be adaptive and understand that the brief in the creative process and the output is going to shift a million times before you get to the end of the project. Creatives tend to put their heart and soul into everything, and so being able

to step away and see things a bit more subjectively is super important and the biggest element of growth in myself."

While 3D programs are helping to facilitate the process, Randolph believes that the key to a successful project is the team behind it. She says: "You have to work with people that are motivated, talented, and well balanced. Some people may be stronger on the build side, others on the creative big idea. Making sure you have a team of people that sing back and forth and balance each other out is the most important part of a successful project."

Top 3 soft attributes required to succeed in the 3D industry

**44%**  
Patience

**48%**  
Perseverance

**65%**  
Creativity

## INDUSTRY SPOTLIGHT

From creating hyper-realistic environments to designing products that don't even exist yet, 3D workflows are enabling a variety of projects from digital fashion to virtual influencers, game environments to simulations and AR brand activations, and much more.

**We look at some cool applications of 3D design across industries and where it could be heading next.**



### HEALTH Tear Couture for ASTi

McCann Health London devised a campaign for The Acid Survivors Trust International (ASTi) inviting viewers to walk through the tear of an acid survivor in an immersive landscape designed for 3D Goggles. Tears were collected and photographed through a microscope - each creating a unique, crystallised pattern which was transformed into a VR landscape.

"There are no limitations of where you can and can't go, as storytellers we can challenge people's perceptions of reality," says Avril Furness, Creative Director, McCann Health London. "We could literally travel to microscopic levels and create epic landscapes within a single tear drop - exploring new unexplored territories - which opens up new opportunities from an emotional storytelling point of view. Making the invisible visible. It's like magic."



### ENTERTAINMENT #FortniteFlipped billboards

To launch Fortnite's Chapter 3, Amplify brought in-game narrative to the real world, placing ambient clues of the new islands through four anamorphic shows across digital out of home sites in New York, London, Tokyo and Stockholm. Environmental gameplay including ice and thunder and new characters were woven into the shows, which evolved in front of fans' eyes.

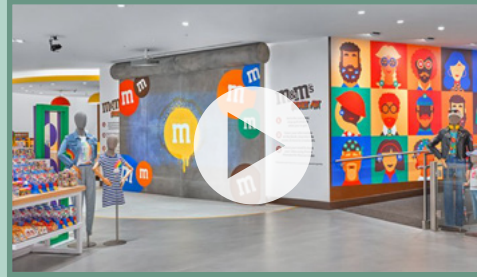
"We created a hype machine for people to talk about what's going on with these 3D installations, but the role of 3D was telling an interesting, intriguing story," says Wilson. "It was inviting fans into the world of Fortnite and to get involved in social conversation. There's real potential for 3D to play that role - where people realise the importance of visual effects in 3D design as moments to tell their stories."



## MUSIC

### Pharrell Williams – Cash in Cash Out

Inspired by the zoetrope, a 19th century circular device used to create the illusion of animation before it was properly possible, Pharrell Williams' Cash In Cash Out music video saw clay figures in a magical playground environment using CGI animation. This is an example of how practical and 3D effects can work together to be super impactful.



## RETAIL

### M&M's

As the architects behind M&M's store design, agency Landor & Fitch have created playful, creative spaces built on a sense of belonging and community. 3D was used to realise the 360 space to help the client understand what they were building together.

"3D helps to create better brand-led design because everything is filtered through - you're able to scrutinise every corner of the spaces you're designing and building to the tiniest detail," says Randolph. "The fact we were able to see it so vividly so early on helped us get to this fine-tuned design that was so brand forward."

## PREDICTIONS

What would blow your mind to see in 3D?

**"Until now, 3D has been a tool to express art. While we're above the bump of the Uncanny Valley, with virtual influencers and the like, the organic is still the hardest thing to achieve. It would blow my mind to see a fully digital, pixel-perfect believable human – a real 3D human with realistic hair like mine."**

Marine Kim, Chief Editor,  
Adobe Substance 3D Magazine



# TECH IS THE LEVELLER

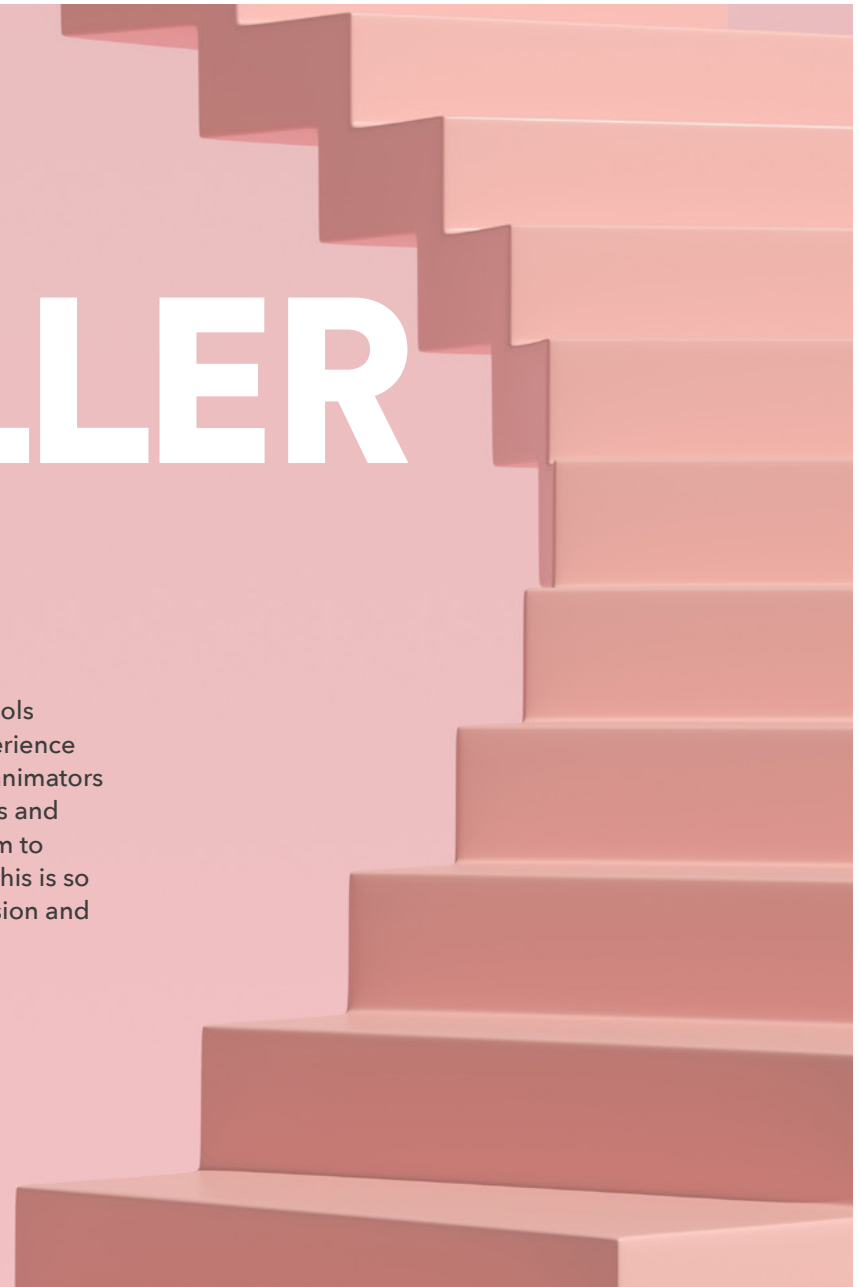
## Designing for the Future

Armed with these insights, it's clear that there is a real opportunity for technology to be the leveller - enabling designers to align and work better, smarter and more creatively.

The right technology allows creatives and designers to tell stories in ways that weren't possible before, without the need for vast teams and technical resources as in the past.

"It's a really exciting time to be creating within the 3D design field; there's so many great tools now on the market and readily accessible," says Matt Fryer, Motion Director, Stereo Creative.

"The scalability and range within these tools mean you now don't need 5+ years' experience to make your mark. It's given designers, animators and creatives from all backgrounds, levels and disciplines, the platforms and the freedom to create, challenge and not be held back. This is so important for our industry in the progression and opportunities that it creates."



## WHEN WORKFLOWS, CREATIVITY FLOWS

A great 3D software is something infinite, something which challenges itself to do better and travels at the same speed of the user. Products like Substance 3D and the wider Adobe suite have been built to enable designers to solve the perceived barriers to 3D design covered in this report to be able to design effectively and efficiently for the future.

"Different steps (often meaning different collaborators) are involved in a 3D pipeline - the transition between these steps must be as transparent for the final user(s)," says Vincent Gault, Senior Technical Artist, Substance 3D. "A 3D

workflow involves many different, yet complementary, tasks to get the job done. Rather than a Swiss army knife approach, our approach is to create dedicated software for each of these tasks. Going into 3D doesn't mean you have to master every step involved in 3D - the user can really focus on something that will enhance the workflow, without having to learn everything at once.

"To make this work properly, we must make sure that these tools communicate effectively to maintain a smooth workflow. It's important to build strong interoperability between our products,

but also to rely on strong standards, so the user knows that we'll not break their pipeline. Another unique element is the scalability of our ecosystem; whether you are a single freelance artist or a big studio, everyone can take advantage of the solution."

Everybody who's working in 3D is doing something different - trying to make a film, an animation, a render, an experience. That's a different output each time. Giving designers the tools and access to the right tech will be vital to prepare for tomorrow's future, today.

**"Going into 3D doesn't mean you have to master every step involved in 3D - the user can really focus on something that will enhance the workflow, without having to learn everything at once."**



# THE FINAL WORD

What do designers want from their 3D design software?

- 1 Easy to use / user-friendly tools
- 2 Low barriers to entry
- 3 Accessibility
- 4 Reusability
- 5 Flexibility
- 6 No limits to unleash creativity
- 7 Soft learning curve
- 8 Compatibility with plug-ins and other apps
- 9 Reduction in development time
- 10 Scalability, interoperability, efficiency

“Better integration between different 3D software and universal material systems would be a huge timesaver. Seamless integration from the creator’s perspective would bring a lot of creative freedom.”



Rokas Petkevicius,  
Senior Motion Designer,  
Stereo Creative

“I want to spend my time designing, not troubleshooting. When I choose software, I’m looking for one that comes with plenty of learning resources and, most of all, a user-friendly interface.”



Hannah Leadbeater,  
3D and Motion Designer,  
Fox Agency

# SUBSTANCE 3D OUTRO

With uncompromising detail and realism, Substance 3D gives graphic designers and experienced 3D artists a connected toolset for creating realistic 3D content for marketing and branding, product and fashion design, architecture, gaming, visual effects and more.

Technology needs to be quick and have smart turnarounds to produce the highest quality in the fastest calculation possible. Substance 3D strikes the balance between optimisation and re-calculation - with a lower entry level suitable for any designer wanting to explore the world of 3D. With a faster, easier, flexible workflow that is non-destructive and allows for reusability and scalability across teams with variations in angles, colours, textures and materials, it provides a consistent feedback loop at all levels of production.

Substance 3D connects seamlessly with other Adobe Creative Cloud tools and services, including Photoshop and Illustrator, as well as third-party solutions like Cinema 4D and 3ds Max, allowing teams to collaborate and produce 3D models and artwork in record time.

**To find out more and begin your journey to take the 3D world by storm, visit [www.adobe.com/uk/products/substance3d/business.html](http://www.adobe.com/uk/products/substance3d/business.html).**

