



Recenter creativity in your 3D pipeline.



Creativity is your most valuable asset as a 3D artist or designer. Your unique ideas, perspective, and style are what make your design work so valuable to your employer, colleagues, and customers. But making space to focus on high-value creative work can be tough when you're faced with complex project demands and tight deadlines.

Getting more time to develop top-shelf creative work has weighty implications for your business's success. "If 3D designers had more time to focus on creativity, quality would increase tenfold," says Wes McDermott, head of Worldwide Substance 3D Evangelism, 3D and Immersive at Adobe Substance 3D. Whether your company directly monetizes the content or products you create or sets itself apart from competitors with a unique brand identity and creative approach, delivering state-of-the-art 3D projects can spell the difference between getting noticed and being left behind.

The good news is that with powerful, task-based 3D tools and connected workflows to support day-to-day 3D asset production needs, your team can iron out process wrinkles so you can focus on ideation and iteration. In this guide, we'll explore five steps you can take to make your 3D pipeline more efficient and give your team's creativity more time to shine.

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More time. Increased creativity. Greater business impact.

Many teams struggle with the same 3D pipeline pain points—a lack of standardization and integration across tools, time-intensive file compatibility issues, creative tools that don't offer enough precision to get quality results, and repetitive tasks that take time and energy away from higher-value work. If your 3D pipeline doesn't have the right capabilities or requires a lot of steps to achieve the creative results your team needs, these shortcomings can impact delivery timelines, work quality, and ultimately, business performance.

Artists and designers working in 3D need a high-performing pipeline that automates repetitive tasks, minimizes production roadblocks, and speeds up time to delivery. Adding precision tools to support specific parts of your pipeline can have a huge impact on efficiency at every step. "That's the goal of all tools—the software should do the heavy lifting and let the artists just focus on creativity," says McDermott. "I just want to be able to focus on my creativity and not fight software. The software is there to take care of a bunch of the tedious tasks that are part of the 3D process and let me focus on bringing my vision to life."

When designers don't have to spend time wrestling with common workflow issues, McDermott says that productivity and business both get a major boost. "The right tools in the pipeline contribute directly to maximizing output," he says. "Focus not only on whether a tool is good for creativity but also good for productivity because you're able to just focus on the things you need to get done instead of fighting 3D workflow issues that arise, which can be constant."

The business impact for verticals like game design, VFX, and motion design is crystal clear—these brands are directly monetizing creative output, and a smoother 3D pipeline has a direct impact on your end products. In verticals where creativity is crucial but the lines between output and ROI are less obvious—such as product design, consumer packaged goods, and ecommerce—powerful 3D apps that free up time for creativity can still significantly impact the bottom line by giving your team a competitive edge.

Working smarter within your 3D pipeline isn't just good for your business. Focused creative time also impacts employee satisfaction. "Creative time makes the work day less stressful and improves mental health—you just feel better," McDermott says. "Ample time lets you focus on things that are more invigorating to your mind as a creative, and refreshes your creativity instead of draining it."

When evaluating a multi-app, complex 3D pipeline for things to improve, sometimes it can be difficult to know where to start. Let's dig into a few common areas where creative teams encounter challenges during 3D asset creation, and the steps you can take to address them.



Step 1. Automate repetitive tasks.

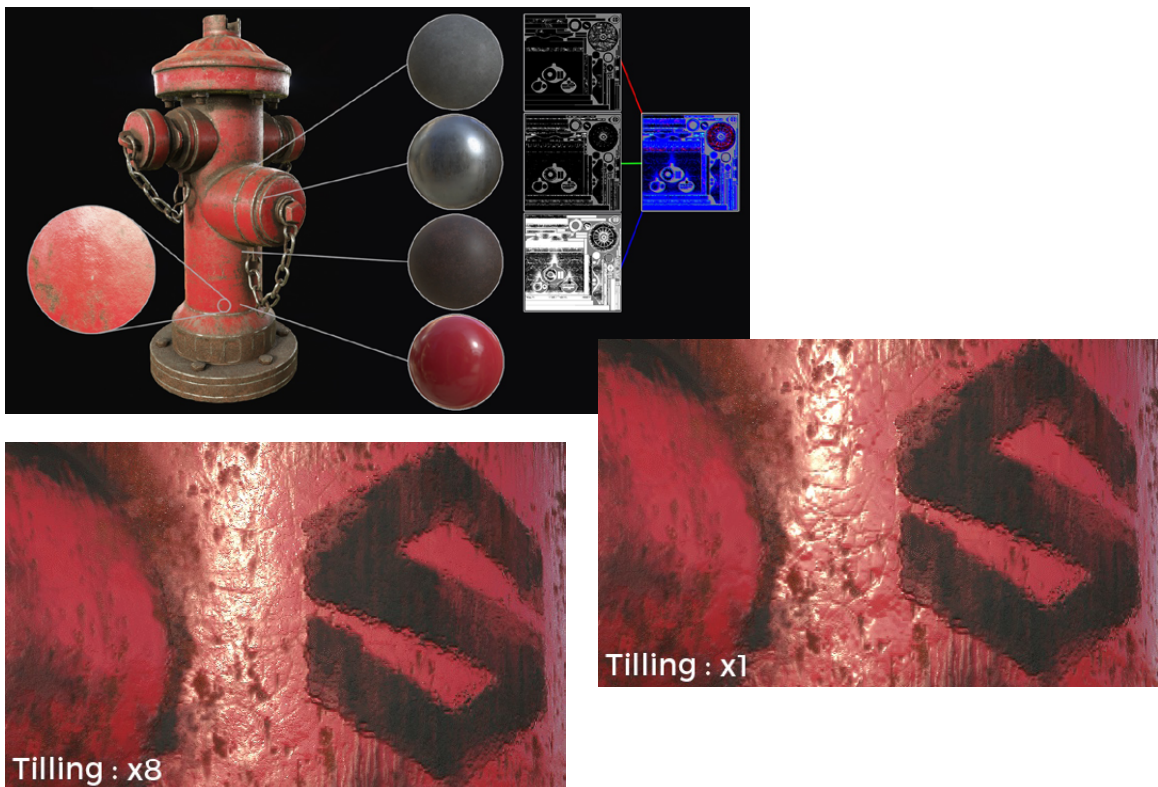
Creating photorealistic 3D assets means getting a lot of technical details just right.

“If you’re building production-ready content, you need time to make sure that your topology is good, that texel density is aligned, and pay attention to highly detailed work,” McDermott says. “There are all kinds of technical requirements that you need to have in place to make sure that the end product looks high quality.”

The fact that 3D design takes a substantial amount of time makes a strong case for automation. Automating crucial but arduous tasks like UV unwrapping, object interactions, and material application can save a lot of time in your 3D design pipeline.

“Auto UV unwrapping is a huge time-saver,” says McDermott. “We use automations in a number of design tools to create and clean up topology.”

Automating file-based tasks can also save design teams enormous amounts of time. Automation toolkits allow designers to fully automate rule-based map generation tasks for large sets of assets, as well as build and customize task automations. “With automations, you can quickly create clean topology UVs and have full control over how those UVs are going to be laid out and how they’re going to work,” says McDermott. “When it comes to creating your own materials, automation also lets you assign materials and easily create your own textures.”



Step 2. Use 3D asset libraries to accelerate creativity.

Asset libraries can also save your team time and help you focus on high-value design work. Whether your team builds its own internal library of reusable 3D assets or you invest in [third-party asset libraries](#), strategically using existing assets can help your team work smarter so everyone can invest creative effort into the projects and tasks that matter most.

The first step is to invest in assembling an internal library of reusable assets that can be shared across the entire creative team so you get the most value out of net-new assets your team is already making. Not only can a company-wide asset library help save your team time—it can also provide visual consistency across related projects. For example, product designers [prototyping a new show car concept](#) could save all of their bespoke 3D materials for the interior and exterior design elements to an internal library at the end of a project. The next time they're working on a new concept, they can go back and reuse or modify existing textures instead of having to start from scratch.

Bringing in outside 3D assets is another great way to drive significant time savings. Ready-to-use models, textures, lights, and backgrounds mean that designers can spend less time custom-creating supporting design elements, and spend more time building hero assets, developing custom textures, and refining 3D renders to get exactly the right look.





Step 3. Explore new ways to integrate your pipeline.

Integration between 3D tools ensures compatibility across your tech stack and makes workflows faster and smoother. The right integrations can save massive amounts of time and dramatically reduce the learning curve for designers adopting new tools.

When tools aren't integrated, switching between different apps for different parts throughout your pipeline can add unnecessary time and frustration. For instance, different 3D applications might use different units of measurement that cause significant issues and delays. "If information isn't converted correctly or if the scale of the objects isn't right, then you might run into issues. Let's say you have an object built at a certain size, and then you take it into a different application and it's suddenly really tiny. Now you've got to rescale everything, and that's always a huge time expense," says McDermott.

McDermott points out that texturing discrepancies are another liability of working with unintegrated tools in your pipeline. "If you're texturing in one program and you want to render it in another program, there's often a discrepancy. You might import a file and think, 'Why did the texture look great in the first program, but now that I've brought it over, it doesn't look so good?' Maybe the roughness is off, or it just looks strange," says McDermott. "Switching between different apps means there are going to be discrepancies. These incompatibilities can add up and create some problems."

Adding powerful tools that integrate smoothly into your existing 3D pipeline means your team can use the best tools to support creative excellence. "I've always used many different 3D apps," says McDermott. "For example, I've used one specialized tool for modeling, and then another tool for animation, and then another tool because it's really good at doing UVs. So you might be juggling a lot of different tools, but if you integrate them, the work goes much faster and better. In the end, you want to make sure that you get the job done efficiently, and you hit that quality bar. Sometimes it's a little harder to juggle a bunch of different software, but if that software you're opening is going to do a better job, it's worth doing."

Integrated tools that simplify the import and export process, support diverse file formats, and standardize elements can erase pain points from a 3D workflow. "Using a standardized material across integrated applications means you know what you're going to get," says McDermott. "That material is going to look the same when you open it in the next app, and that's a real benefit."

Step 4. Simplify your creative collaboration approach.

Working within multiple tools as a solo 3D creator can be a challenge. When you add other creative collaborators into the mix, it can be even more difficult to manage file locations, versions, and settings. And when inevitable change requests come in from stakeholders, a decentralized workflow can make design updates hard to execute in a timely fashion.

“Let’s say that you’ve created a model and you’ve sent it over to another designer to be textured or rendered in another application, but then you want to make some changes to the model and need to get it back,” McDermott says. “To propagate updates back through different disconnected software, and then try to get the asset back together again, is always problematic.”

Having your entire team work within a centralized and connected 3D ecosystem can minimize these collaboration pain points. Using a shared set of tools and specifications means that moving files between programs won’t cause major issues. Storing files in a centralized location lets people access what they need, when they need it. And when working with programs that can seamlessly handle changes from one part of the pipeline to the next, collaboration is a breeze.

“When tools are connected, teams are able to seamlessly send information back and forth,” says McDermott. “A designer can work on something and get it to the next stage and next application and retain a history of the work.” This kind of continuity is essential for smooth handoffs between collaborators, and invaluable for the person doing the next step in the workflow. “If you’re working on a scene with multiple people at the same time, for example, you can send data back and forth between different applications uninterrupted—without losing fidelity or workflow history,” he says.



Step 5. Invest in non-destructive workflows that support iteration.

No matter what industry you work in, being able to quickly explore new design variations and concepts is critical to creative success. Increasing iterations at every phase of the 3D pipeline can help you discover great new ideas faster—which means you can launch innovative content and products ahead of other market players, honing your business's competitive edge.

3D design tools and processes that make changes fast and easy are invaluable. When going back into files to make changes or updates or to create variations on a theme, the right tools can save your creative team from time-intensive rework.

AI-powered, non-destructive design workflows open up creative possibilities. “Non-destructive workflows let you change parameters, or expose the parameters of an asset you’ve created,” says McDermott. “Exposing parameters means another person can see and alter those asset parameters, and then customize it the way they want.” Instead of having to create multiple versions of models or textures, designers can simply adjust a few settings to switch up their final look.

In addition to non-destructive workflows, the right automations can make iteration in 3D a breeze. “With an automation toolkit, you can take procedural material and randomize the parameters, and kick out like 50 versions,” says McDermott. This can be a huge time-saver for background or decorative elements that benefit from some subtle variation but don’t have highly specific creative requirements.



Small changes can make a big impact.

Every design team can benefit from more free time to pursue creative excellence. With a few targeted changes to your 3D pipeline, your business can reduce low-value, time-consuming tasks and give people more time to deliver stellar creative results. Automating repetitive tasks like UV unwrapping can be an immediate time-saver and boost creative quality. Asset libraries can provide a foundation for iteration and fill in creative gaps quickly. Integrations reduce import and export issues and standardize project elements so assets can move smoothly through your 3D pipeline. And creative teams can collaborate and iterate more effortlessly when tools support seamless file handoffs and non-destructive design workflows.

These pipeline improvements can add up to serious time savings. For McDermott, getting time back to focus on creativity means more great ideas make it out into the physical world. "When you start a project, you have this feeling of 'Okay, I have this idea that I want to share with other people.' I think the project is successful if the core spark of the idea got out at the end," says McDermott. "If I can see my original idea in the project reflected in the work that's there, then I feel it's a good accomplishment."



Adobe can help.

Smart creative apps and an ever-growing library of production-quality assets combine in the **Adobe Substance 3D Collection** to make 3D design more approachable than ever. Easy to use and impossible to outgrow, these tools are transforming workflows for designers of all backgrounds and across industries, allowing them to create stunning content at warp speed.

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