



The
beginner's
guide

Create in VR



The ability to create and innovate is essential for companies to grow and stay ahead of the competition.

But companies bringing new products to market or working in industries like architecture, engineering and construction face a variety of complex challenges that need creative solutions.

Tight budgets mean creative teams can't afford to waste materials, and pressure to deliver quickly can hinder creative flow. Then there's the logistics of creating and designing when teams are distributed around the country, or even the globe. **How do you collaborate effectively with colleagues or clients**

who aren't in the same room?

Architects, for example, will often need to schedule several meetings with clients before the final draft is approved. Retailers might commission expensive prototypes, only to find a technical glitch at the eleventh hour that requires them to go back to the drawing board. All of which costs time and money.

One solution to these problems could be virtual reality. It can transform every part of the design process for research and development teams.

How VR can overcome creative challenges

When design teams work in virtual reality they put on a VR headset (for instance, a Meta Quest Pro) and are represented in an immersive 3D environment by a digital avatar. Using special controllers, they can draw, build, touch and move things within a virtual space. Or, using mixed reality 'passthrough', they can manipulate a virtual object in their physical environment.



In both cases, it feels more natural than touching a screen or clicking a mouse. **And, crucially, you can collaborate in the same space with your co-workers, who are represented by their own avatars.**

Maybe you're thinking, 'Why?' **Well, we don't think in two-dimensions. So why should we create in two dimensions?**

One of the biggest benefits of virtual reality is the ability to experience creative ideas from every angle, in all their 360-degree glory. In VR, blueprints

leap off the page. Designs feel more real. And dimensions are easier to understand.

The end result is faster development, better visualization and enhanced collaboration, not to mention **cost savings.**

Let's look at some of the key creative challenges facing businesses today and how VR can help solve them right now.



 CHALLENGE 1

Developing 3D objects with 2D tools

Visualization is a key part of the design process. While digital design has been around for some time, it fails to capture the nuances and complexities involved in designing products for a 3D world. Other techniques like clay modeling are slow and hard to replicate at scale, which means it's almost impossible to determine how a design will behave in the real world before a full physical prototype is built.



HOW VR CAN HELP

3D visualization

VR can replace sketches, computer-aided design and clay models with room-scale 3D visualization. It has huge scope for creative industries, with the 3D rendering market expected to grow from **\$2.8 billion in 2021 to \$12.5 billion by 2029¹**.

With 3D modeling, you get a far better feel for form, proportion and relationship to the environment than with 2D tools. Pharmaceutical firms, for example, **can scale up tiny molecules to massive size** so that scientists can actually walk around them and get a better understanding of how their constituent parts interact.



 VR IN ACTION

Drug company **Nimbus Therapeutics** is using VR to [help design breakthrough medicines](#), with employees collaborating with colleagues in real time. By investing in VR, Nimbus expects to save tens of thousands of dollars a year on project costs and potentially increase earnings by streamlining processes.

¹GreyViews, '3D Rendering Market Report', 2021

CHALLENGE 2

Avoiding mistakes

Mistakes cost time and money. Even small errors or design flaws can have a big financial impact on your project.

Because of limitations with 2D tools, mistakes often don't get caught until well into the product development cycle.



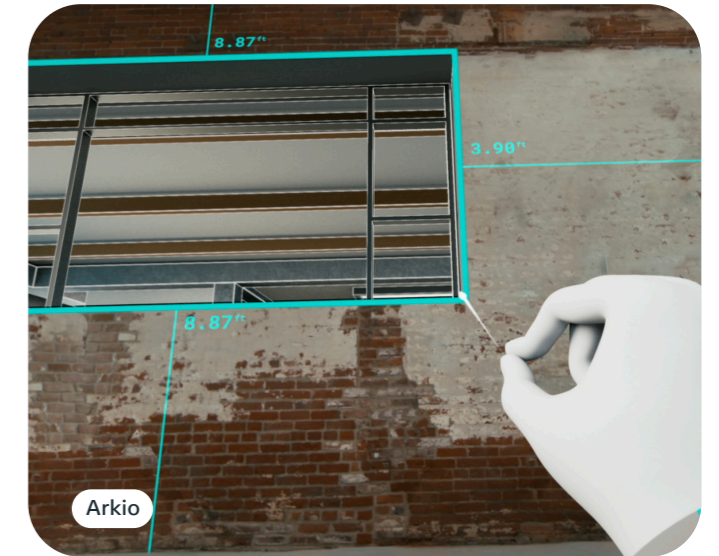
HOW VR CAN HELP

Simplifying reviews

Imagine reviewing the blueprints for a new build. You'd need to be comfortable with technical drawings and able to visualize the dimensions of the final design. Now imagine being in VR, literally walking through a fully rendered space, and being able to check things like sight lines, wall heights or placements of fixtures and fittings.

VR makes it easier to spot and fix problems early on in the design process at a fraction of the traditional cost. And it doesn't have to be a building. Say your team is working on designing a medical device using VR. Instead of

having to build specialist manufacturing equipment to create a prototype, it can be tested virtually first and any glitches can be ironed out before committing to physical production.



VR IN ACTION

Norwegian architecture firm **A-lab** has [replaced renders and sketches with 3D models in VR to create virtual walkthroughs](#), making it easier for clients to understand and review concepts. It helped one client get buy-in for a project from local politicians who could easily understand the potential of a redeveloped site.

CHALLENGE 3

Creative silos

Any successful product development requires effective collaboration. This is especially true of products that have multiple elements with different design teams. A new car, for example, might have separate design teams working on the interior and exterior, as well as UX developers working on software. Given the global nature of these teams, it's often hard to collaborate, with long delays as designs are shared, absorbed and updated.



HOW VR CAN HELP

Real-time collaboration

VR makes it easier for geographically dispersed design teams to collaborate in real time by working on 3D models in shared virtual spaces as if they were in the same room together.

This isn't like a Zoom call, where everybody is in their own little box. We're talking

about the feeling of really being present with each other in the same space, with spatial audio that helps people hold more natural conversations, as well as the ability to customize the space to the task at hand, whether it's a team brainstorm or a more formal presentation.



CHALLENGE 4

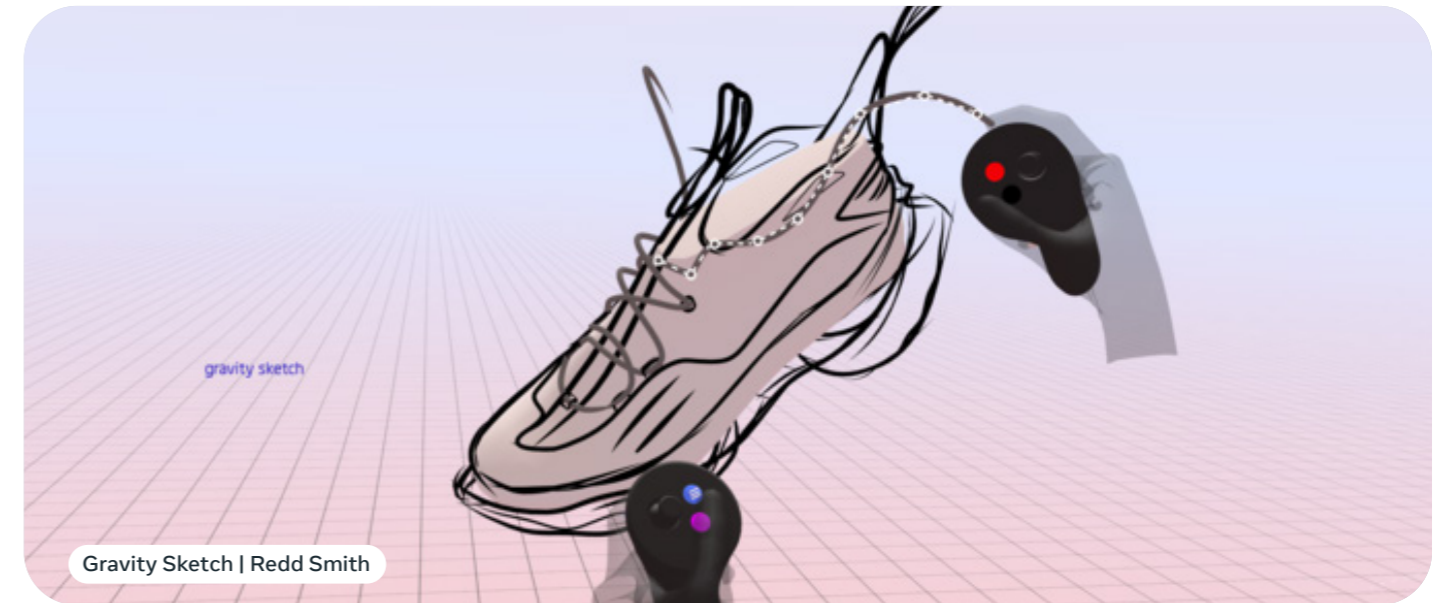
Staying on budget

Before bringing a new product to market, you need to test it by building prototypes. This can involve investing in expensive physical equipment or ramping up capacity to increase the pace of innovation. **The cost of overheads and material waste all have to be factored into the budget.**



HOW VR CAN HELP

Rapid prototyping



With VR, there's no need to invest in physical manufacturing for R&D. It enables rapid prototyping, **helping to save a significant amount of time and**

money. Barely any physical materials are needed until the final stages of the design process when a physical prototype becomes necessary.

VR IN ACTION

Computer peripherals manufacturer **Logitech** needed a way to help partners and potential sponsors understand what it had planned for a major event in Berlin. But the creative team was only given three weeks to prepare something. They created a [series of 3D models in VR](#) to showcase the potential space - including a giant robot. **The result was super fast collaboration and a successful launch event.**

 CHALLENGE 5

Speed to market

Time is of the essence when you're designing a product, whether you're rushing to meet the demands of customers or trying to beat the competition to market.

Only 55% of product launches take place on schedule, according to Gartner research². Many factors can cause hold-ups, including delays in product development, failure to meet customer requirements, product quality or even supply issues.



²Gartner, 'Product Manager Survey', 2019

HOW VR CAN HELP

Agile workflows

Thanks to its flexibility and agility, VR can offer a quick turnaround on product development and delivery so great ideas get to the shelf or showroom faster. As well as testing the product in a VR environment, you can make 3D changes on the spot with no physical remodeling needed.

An Accenture study shows that new technologies have already helped some companies reduce 'idea-to-product' time by 9.5% annually³, with scope for more time savings as VR take-up increases.



VR IN ACTION

PepsiCo designers used Meta Quest VR headsets and 3D printers to [redesign the brand's](#) iconic two-liter bottles. Because of the pandemic, they had to work on the designs from home, but were able to speed up processes and complete the project on time by collaborating on 3D models in real time and product testing in a virtual room.

³Accenture, 'Turbocharging Industrial Speed to Market' 2022

7 steps to get started in VR

Now that you've seen how virtual reality can help you solve some of your most pressing creative challenges, **the next step is to put together a strategy for actually getting started.** It can sound daunting, but it doesn't have to be. In fact, we think that if you follow this 7-step framework you'll be in a pretty good place.

STEP 1

Kick off – Establish an implementation timeline so you know what your major milestones are. Secure budget from IT and purchase the hardware you need.

STEP 2

Develop use case and KPIs – Successful VR pilots have a specific goal in mind. Decide what objective you're trying to solve for (e.g. making creative teams more agile and reducing time to market), determine the right KPIs then engage with your test population; in this case your design team.

STEP 3

Engage your executive sponsor – Another reason some technology pilots fail is because they don't have executive buy-in. The best way to secure this (along with the funding or operational support that comes with it) is to get your leadership team to try VR and experience their own 'a-ha' moment. Once you've done that, get feedback on your use case and KPIs and set up regular check ins.

STEP 4

Choose (or develop) your VR app – While Meta makes the hardware, VR experiences come to life through the apps in our store. There are loads of apps from third-party developers that your design teams can work with, like Gravity Sketch or Shapes XR. Or you might choose to develop a bespoke experience. Whichever route you go, set up regular review sessions with the test team and iterate based on their feedback.

STEP 5

Set up hardware and software – Enroll in the Meta Quest for Business beta to get access to device and app management controls to make deployment swift, smooth and secure.

STEP 6

Launch pilot – Activate your headsets and let your creative team start experimenting. Work with your tech partner (if you have one) to set up onboarding, demos and troubleshooting. Track impact against your KPIs and start thinking about how to scale.

STEP 7

Conquer the world – Once you see positive results from your test team, go back to your exec sponsor with plans for additional use cases and budget. Purchase headsets and follow the previous steps to scale up.



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