Lenovo Immersive Design and Engineering

A smart solution redefining ‘the art of the possible’

Smarter technology for all

Lenovo

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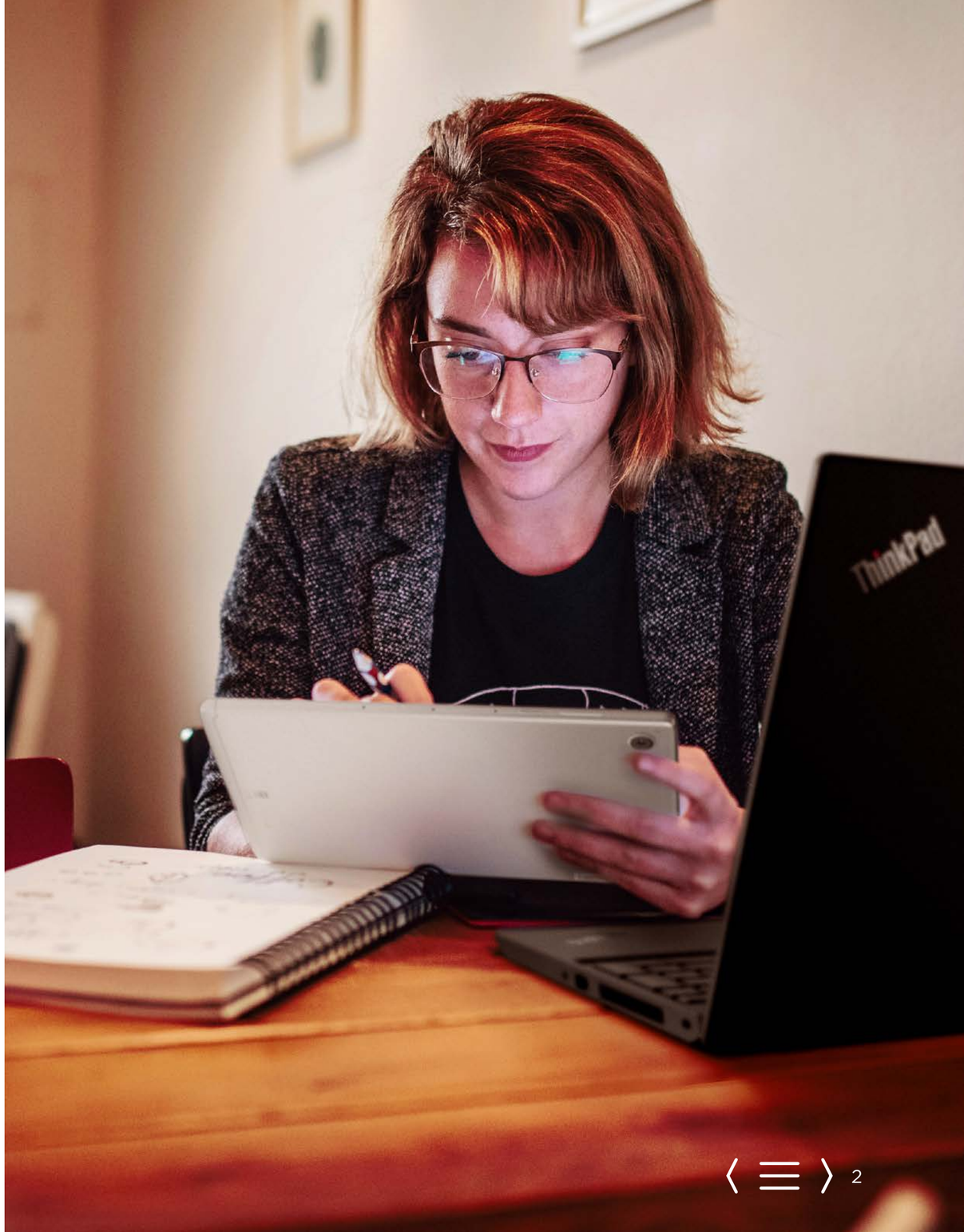


Taking your business beyond reality

Today's workforce demands more robust digital solutions. In a post-pandemic world, it is crucial that teams can collaborate and connect with ease. What's equally important, is that hardware and software are integrated and amplified in ways that make the most of the great work your teams are producing—regardless of complexity or location.

Virtual Reality (VR), Augmented Reality (AR) and Mixed Reality (XR) have long been buzzwords inside the tech industry. However, the market is experiencing something of a boom. As it continues to grow, the demand for VR solutions is predicted to reach $37 billion by 2025, and $56 billion by 2026; and AR solutions, as much as $128 billion by 2025.

If you're looking to stay ahead of trends and keep pace with the industry, it's well worth exploring how you can take this technology beyond a 'one-and-done' or pilot project. You can fully utilize it as part of your day-to-day processes and workflows.

Extended reality is about much more than buzzwords. It is a truly immersive standard by which most other virtual solutions will soon be measured.

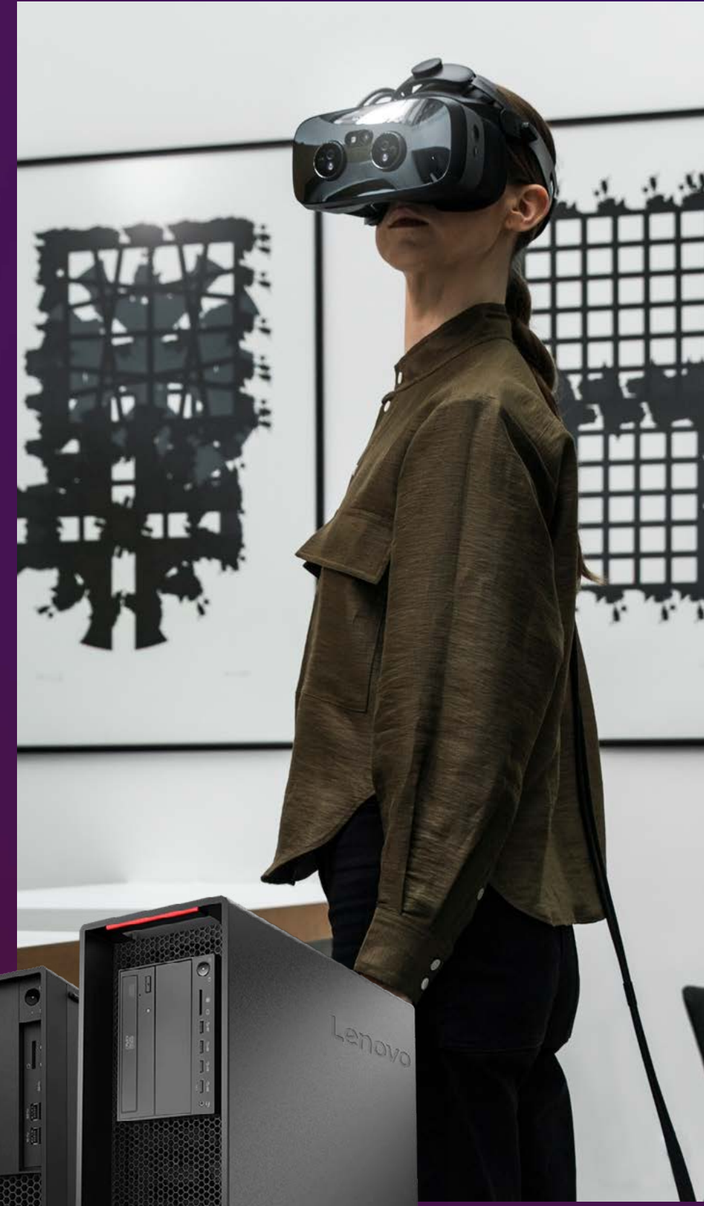
During the pandemic, creative solutions had to be found to overcome physical separation, ensuring that health, connection, collaboration, training, and our sociable culture could continue to thrive. VR, AR and XR were uniquely equipped to facilitate our needs as a business. Now, we're expanding on these concepts, finding new ways to bridge multiple barriers. Combining physical and digital elements creates experiences for employees and clients that literally make the future visible.

Powered by High Performance Lenovo Workstations & Next Generation Varjo VR-3 & XR-3 headsets, the Lenovo Immersive Design & Engineering suite is a best-in-class ProXR solution that redefines the realm of possibility. This seamless fusion of physical and virtual components, in photorealistic quality, empowers you to deliver the most immersive, mixed-reality experiences ever constructed.

The full Lenovo Immersive Design & Engineering package encompasses a combination of leading-edge hardware and software. This enables you and your teams to deliver improved innovation and accelerate processes, as well as allowing people to collaborate effortlessly, and visualize without limit. These unique solutions are proven to increase employee productivity and engagement, and aid in the development of a rich and desirable work culture.

VR, AR, and XR are not new technologies; but their potential to transform the world of work—including your business—is groundbreaking. Technological advances in mixed reality solutions are aligning with a global demand for more remote collaboration, more efficiency, more ingenuity, and less cost.

The time is now.



Eradicating restrictions and overcoming obstacles

COVID-19 prompted us to find ways of connecting and collaborating remotely. The beauty of the Lenovo Immersive Design and Engineering suite is that it grants freedom to your workforce, and flexibility to your business—using technology to remove boundaries and futureproof your enterprise.

The challenges VR, AR and XR can help you overcome include:

Distance—physical separation is no longer an issue with mixed reality. Communal spaces can be created instantaneously, allowing teams to work, connect and socialize together in a simulated environment so photo-real, it is as though they are in the same room together.

Time—designers and engineers no longer need wait to see the finished results of their carefully-planned projects. Walk into structures that haven't been built yet; sit in vehicles that are still at the concept stage and repeat processes to ensure every detail has been considered.

Complexity—staff can authentically experience unusual situations and scenarios for training purposes. Lighting and conditions required to achieve specific goals can be simulated in clear resolution and with pinpoint accuracy.

Risk—eliminate the element of danger in high-risk scenarios. Test fly a new aircraft without fear; run emergency procedures as though they were happening in real time; practice pioneering procedures in virtual circumstances—all without hazard.

Cost—make travel and accommodation expenses a thing of the past. Recognize potential errors before expensive build or manufacturing processes begin. Save on overheads such as energy costs, fuel bills, premises leases, maintenance fees and more.

The way we work is changing:

80%–84%

of IT decision makers predict hybrid or work-from-home models

60%

of employees prefer to work from home at least half the time

Lenovo Immersive Design and Engineering: changing your working world

Since the world changed, organizations are treading carefully—taking cost-saving measures and avoiding risk. What this does, however, is stunt growth, halt creativity, restrict innovation, damage morale, and negatively impact staff retention.

Businesses like yours often need to run high-risk procedures and tests. Design cycles and approval processes take time. Training and upskilling staff can be costly. These things can't be avoided. They are imperative to progress—something no one can afford to forfeit in these changing times.

The Lenovo ID&E solution encompasses everything you need to take disparate, remote teams, and turn them into tight-knit, collaborative entities. This cutting-edge collection of technology means your people can work flexibly, collaborate seamlessly, interact with ease, and share experiences as real as reality itself—helping you to increase productivity and retain essential talent.

Excited to get started? Lenovo will manage every step of the process, including:

- Custom configuration (if required).
- Devices set up for immediate, 'plug-and-play' use, shipped direct to employees at home or in the office.
- Easier IT management of users and security, reducing operational costs and saving time.
- Faster onboarding for more immediate progress, maximizing workforce productivity—plus all the support your people need to stay that way.
- Ultimate portability, empowering staff to work anywhere.
- Seamless integration across any environment, incorporating connection to your on-premises, off premises or cloud data center to ensure the safe storage and security of all your information.

Explore the Lenovo Immersive Design and Engineering solution

We've put together a comprehensive VR/AR/XR package that incorporates a collection of cutting-edge systems and equipment. This will provide everything you need to facilitate game-changing remote collaboration.

Hardware

3 powerful **Lenovo Think PCs**—smart hardware that will ensure optimum performance from all aspects of your ID&E package—provide best-in-class desktop computing; PLUS: you'll get **built-in Lenovo ThinkShield** for enhanced security:

ThinkStation P520—blending lightning-quick computing and professional graphics, this PC provides leading-edge storage, memory, and cooling, as well as being able to handle everything from huge workloads and complex, 3D modelling, to high-resolution virtual reality. It's also completely configurable, designed with performance, reliability, and energy efficiency in mind.

ThinkStation P620—powered by AMD Ryzen™ Threadripper™ PRO, this robust machine supports a choice of Windows and Linux operating systems and contains 2 NVIDIA® RTX™ A6000 graphics cards. Combining legendary reliability and innovation with professional manageability and enterprise-class support, the P620 is performance-tuned and ISV-certified for multithreaded application environments. It also boasts a best-in-class air-cooled thermal system, and a built-in suite of security solutions.

ThinkStation P920—a true workhorse, this PC is powered by 2 INTEL® Xeon® processors and 3 NVIDIA® professional GPUs, providing the most I/O in the industry. Perfect for running intensive apps for rendering, simulation, visualization, deep learning, and artificial intelligence.

You'll also get an array of **dynamic accessories** that will bring your extended reality experience to life:

Varjo VR3 HMD—setting a new precedent for virtual reality headsets, this incredible feat of design offers the tech market's highest, human-eye resolution, and deeper focus in your daily workflow.

Varjo XR3 HMD—delivering the most immersive mixed reality experience ever constructed, this dual-camera headset features photorealistic visual fidelity across the widest field of view for anything else of its kind. Offering depth awareness, lighting considerations, and the seamless blend of real and virtual elements, you won't be able to help believing your eyes.

VR Tracking Sensors—accurate positional trackers help to detect the exact position of your VR/XR headsets in any given space, ensuring proportions and simulations are as precise as possible.

ThinkVision P Series Monitor—offering first-class display quality and exceptional performance, this range of slim, user-friendly monitors is divided by screen size (24 to 44 inches), resolution (FHD to 4K UHD), and aspect ratio (16:9 to 32:10), displaying 1.07 billion, 99% accurate, Adobe RGB colors.

Software

Your high-performance PCs and accessories require **smart software** to fully realize every pixel of potential—including the very best operating systems:

MS Windows 10 Pro—making identity, device, and application management simple, this gold-standard operating system helps your teams stay business focussed. Providing intuitive control over IT infrastructure, your organization will always be ready for anything.

Varjo Base VR HMD Management Software—run and manage your VR and XR headsets with ease. Use it to observe what the wearer is seeing, quickly access presentation tools, analyze your project with real-time data—and so much more.

Other smart software includes:

SentinelOne Breach Protection—autonomous endpoint protection that detects, prevents, and responds to attacks.

SentinelOne Core—has all endpoint security essentials including prevention, detection, and response.

SentinelOne Control—adds security suite features: device control, endpoint firewall control, and full remote shell execution.

SentinelOne Complete—adds the Deep Visibility Threat Handling module for advanced forensic mapping, visibility, and nuanced response capability.

Ready-to-Provision Operating System and Drivers—manage deployment for a fraction of the traditional cost and effort.

Lenovo Cloud Deploy—store and access images in the cloud for mobile access anywhere, any time.

Windows Autopilot—setup and pre-configure new devices, so they are ready for productive use out-of-the box; provision without the hassle as Lenovo registers your solutions with Microsoft directly from the factory.

Smart Services

Another great feature of this solution is that it's fully customizable to meet your exact business requirements:

Configuration services—move the burden of configuration—everything from imaging, optimization, drop in the box, BIOS settings, and more—to Lenovo.

Ready-to-Provision Series

All the essential elements you want on each PC without any unnecessary content:

Ready-to-Provision (RTP)—this added option offers all essential drivers, reduced inbox apps (approximately 25 removed), and no third-party software. A good option to consider if managing your Windows PCs with System Center Configuration Manager (SCCM) but looking to offload image maintenance.

RTP Release Control—description here (could not find anything definitive)

RTP+—a custom preload providing you with a higher degree of control, the option to load up to 5 scripted applications for a swifter deployment experience, and customization when deploying PCs.

Other additions include:

Drop In the Box—add your own customized documentation to every PC shipped to your people, such as how-to-use it and contact information, to reduce the IT support burden and empower users.

Custom BIOS Settings—tailor your security and network requirements to meet your specific needs.

Custom Fulfillment Services—customized shipments, sent directly to end users, can include PC, external display, accessories, software, and instructions.

Save time and money with Lenovo Configuration Services:

70%

of IT professionals consider external PC service important[1]

41%

of businesses say external PC service reduces the cost of IT[1]

7.5 total work hours saved

per device, using Lenovo Configuration Services[2]

Sources:

1 US SMB Lenovo Managed Services Study 2018, Techaisle

2 Lenovo ADS study (total hours spent, across all IT and end user staff, deploying a device compared to Lenovo ADS)

91%

of **Premier Support** customers indicate they would purchase again

88%

of customers indicate they would recommend **Premier Support** to a peer

70%

of accidental damage incidents require replacement of 2 or more parts[1]

Source:

1 Lenovo repair statistics, March 2020

Support and Protection

In addition to ThinkShield, you can get all the support you need and secure and protect your technology investment, while reducing costs and avoiding downtime:

Premier Support—advanced technical support from one contact for simplified end-to-end case management with 24/7 direct access

Accidental Damage Protection—be ready for the unexpected. Spilled coffee on your VR headset? Knocked your PC off the desk? No problem. This plan has you covered for repairs and replacements.

Lenovo Sealed Battery Warranty—extend battery coverage by up to 3 years to avoid the cost of downtime and unplanned IT expense.

Keep Your Drive Service—dispose of your data, your way.

Asset tagging—keep your assets safe with streamlined inventory control and device management, featuring easily-customizable, tamper-proof asset tagging.

Trusted Hardware and Software Security

Get end-to-end security from manufacturing, through transport and setup, all the way to everyday use:

Trusted Device Setup—sealing the software at point of manufacture until first boot.

Transparent Supply Chain—documenting supply chain security.

Intel Endpoint Management Assistant—with business-enabled tools to monitor, restore, upgrade, and help protect devices, inside and outside the corporate firewall.

Sustainability

Lenovo CO_2 Offset Services—compensate for carbon emissions of each product directly—considering production, shipment and typical usage values.

Lenovo Immersive Design and Engineering in action

Several industries are adopting this solution as part of their processes and workflows, across a wide range of verticals. These include:

Automotive & Aerospace

Anyone working with large-scale projects, multiple pieces/parts with dispersed teams and locations.

Transportation

Projects with multiple stakeholders, lots of reviews and design iterations back and forth

Product Design & Manufacturing

Projects with fast iterations and short time to market (automotive & aerospace supply chains, etc.).

Energy

Anyone with very large projects where 1:1 mock-ups/models are not practical (physically or financially).

Architectural, Engineering & Construction

Pixels are cheaper than bricks; anyone wanting to create real-time, virtual walk-throughs. Also, designing fire safety routes, crowd control, lighting, building efficiency, flow, visuals, etc.

Public Sector & Government

AEC or transport projects with multiple stakeholders.

Healthcare & Life Sciences

All hospitals for use with medical and surgical training.

Research, Training & Simulation

Anyone needing to create 1:1 scale virtual replicas/digital twins for product research, training, or simulation.

CASE STUDY

“Our partnership with Aston Martin goes beyond just a simple hardware provider. We take a holistic view on an end-to-end solution portfolio, delivering the best current technology for the challenges at hand.”

Mike Leach,
Lenovo Worldwide Solution Portfolio Lead

ASTON MARTIN

Aston Martin has used the Lenovo Immersive Design and Engineering solution as a key tool in improving the early design process. The superior, high-resolution graphics enable design teams to efficiently prove out their Human-Machine Interface (or HMI), and aid in developing ergonomics. VR also iterates much faster and costs far less than producing expensive concept models.

The 2 mixed reality cameras inside the Varjo XR3 headset film the real world around the user in real time, all the time. Virtual content can then be inserted into any space, at a level of realism that has never been possible before. The user will, for example, be able to see their own hands reaching for the steering wheel of a fully rendered, Aston Martin DBX. The exquisite detail can go as far as showcasing carbon weave direction, and stitch detail on interior seating.

Designers can remove layers of the vehicle digitally, empowering them to scrutinize the inner workings of the engine, electronics, and more. This means potential issues can be detected and resolved before a single component is manufactured—keeping costs to a minimum.

“The Varjo XR3 is a mixed reality headset. What that means is that its capable of fusing together the real and the virtual world in a way that’s imperceptible to the human eye.”

Neil Broadley, Varjo

As vehicle model sizes get larger, and data sets get more complex, automotive companies such as Aston Martin need the high-performance, high-fidelity capability of Lenovo ThinkStations, powered by phenomenal NVIDIA® processors. This provides extraordinary computational CPU and graphical processing power from a single workstation.

The Lenovo Immersive Design and Engineering XR experience has enabled Aston Martin to connect all business workstreams, from design and engineering, through to marketing, sales, support and beyond. Better yet, staff can do their extraordinary work from wherever they happen to be.

“This breath-taking XR experience is able to run smoothly with consistent frame rates, thanks to the NVIDIA® RTX™ A6000. This is a 48-gigabyte frame buffer that enables Aston Martin to really dial up the detail to get the maximum quality and ultimate fidelity.”

Mike Leach,
Lenovo Worldwide Solution Portfolio Lead

Contact us

Discover more about the Lenovo Immersive Design and Engineering solution and embrace a brand-new view of reality.

Talk to us >

Smarter technology for all

Lenovo