

RESEARCH SUMMARY

Permissionless Innovation and Immersive Technology: Public Policy for Virtual and Augmented Reality

After many years of anticipation, immersive technologies such as augmented reality and virtual reality appear poised for explosive growth. As with any new technology, however, social and economic concerns will inevitably arise that demand policymakers' attention.

In “[Permissionless Innovation and Immersive Technology: Public Policy for Virtual and Augmented Reality](#),” Mercatus Senior Research Fellow [Adam Thierer](#) and former Mercatus Research Assistant Jonathan Camp educate readers on advances in immersive technologies and their potential policy implications. The study recommends a “permissionless innovation” model to protect and cultivate an innovative immersive technology industry.

BACKGROUND

Immersive technology includes augmented reality (AR), which displays digital information to enhance users' natural environments, and virtual reality (VR), which immerses users in a completely digital environment. These technologies are poised to radically affect multiple industries:

- *Education and museums.* Immersing users in virtual environments allows Google's Expedition Pioneer Program to provide 360-degree video tours of famous landmarks and ruins, and museums are already using AR technology to provide interactive content.
- *Worker training and systems monitoring.* VR industrial simulators such as ForgeFX are being used to train workers to master a variety of complex tasks, while AR systems can be leveraged to help farmers with crop management from afar.
- *Healthcare.* CT scans and MRIs are being converted into 3-D models to perform surgery that was once thought impossible, and the world's first VR medical training facility opened in London in November of 2016.
- *Engineering.* Virtual modeling technology is being combined with VR to allow touring of unbuilt vehicles and buildings, lowering the costs of construction and design.
- *Military.* The military has used VR for combat simulations, medic training, flight simulators, vehicle simulators, and even the treatment of PTSD.

GOVERNANCE

While immersive technology is incredibly promising, challenges lie ahead in the form of privacy, safety, and intellectual property concerns. As these challenges arise, lawmakers are encouraged to resist a “precautionary

principle” approach that may hamstring a promising industry and instead pursue a “permissionless innovation” model to encourage development:

- *Defend permissionless innovation as the policy default for immersive technologies.* This default rule would send a clear signal to entrepreneurs that they can innovate freely.
- *Identify and remove barriers to entry and innovation.* Such barriers include medical licensing laws that inhibit telemedicine and federal regulations that restrict healthcare innovation.
- *Protect freedom of speech and expression.* AR and VR are modes of communication that should be protected, regardless of content, by the First Amendment. This protection includes immunities from liabilities associated with third-party uses.
- *Promote education and be patient as social norms evolve.* Immersive technologies will produce new social challenges, but education and the “regulating” power of social norms should be used rather than formal regulations to resolve these problems.
- *Rely on existing legal solutions and the common law to solve problems.* Most problems that arise can be addressed within the existing legal system, so policymakers should not turn to laws that are preemptive and precautionary in character.
- *Push for industry self-regulation and best practices.* This can include best practice guidance, private codes of conduct, and third-party certification and accreditation. In order to remain competitive, companies will design products to mitigate the risks and problems associated with immersive technology even in the absence of regulation.
- *Adopt targeted, limited legal measures for truly hard problems.* Absolutely necessary interventions should be predictable, minimalist, consistent, and simple, and they should occur after the technology has been implemented. These interventions should be evaluated to ensure they pass a strict benefit-cost analysis.