Extended Reality (Xr) Market - Growth, Trends, Covid-19 Impact, and Forecasts (2023 - 2028)

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Report description:

The Extended Reality (XR) Market is expected to register a CAGR of 57.91% over the forecast period. Extended reality (XR) is among the emerging technologies and encompasses immersive technologies, such as augmented reality, virtual reality, mixed reality, and other future realities that may emerge. One of the main driving factors for the market is the increasing demand for reducing the distance between people and richer visual content.

Key Highlights
Several companies are developing supporting technologies that may help commercialize XR technologies globally by identifying great potential in the XR domain.
In December 2021, Mawari, a leading XR streaming solution provider, announced that its 3DXR Content Streaming Platform for the Metaverse had made its debut on the AWS Marketplace, a managed and curated software catalog from Amazon Web Services that allows customers to find, buy, and immediately deploy third-party software.
The increasing adoption of Gesture-based computing is also aiding the market growth by opening up several applications and opportunities. Gesture-based computing refers to interfaces where the human body interacts with digital resources without using common input devices, such as a keyboard, mouse, game controller, or voice-entry mechanism. It is now ripe to be a part of gaming, TVs, devices, kiosks, medical, 3D sculpting, engineering, medical professionals, designers, advertisers, and even people with physical disabilities. Gesture-based gaming has moved beyond traditional gaming consoles and is witnessing increasing adoption in educational games for children.
For instance, Magic Touch Math is the first game that focuses on learning mathematics using custom gesture drawings. Thus, gesture-based recognition can also be used in applications apart from traditional gaming applications.?
In December 2021, Oppo unveiled the Air Glass, Augmented Reality (AR) glasses that feature a Cicada Wing Design and an internally developed Spark Micro Projector. The Air Glass offers diffraction, waveguide display that supports touch, voice, head

tracking, and gestures. The frame uses a monocle design for the glass, with an attachable AR-capable display that latches on to existing prescription glasses. Furthermore, integration with the rest of its ecosystem has allowed the company to enable seamless experiences for its consumers. For instance, When an Air Glass is paired with an Oppo Watch 2, users can use hand movements to confirm, cancel, and switch application cards.
Physical lockdowns in light of the COVID-19 pandemic across significant regions may positively affect the XR technology demand. Enterprises worldwide are trying to find ways to get their internal and wider geographically dispersed teams to communicate, collaborate, and find a path forward during the crisis. The diverse potential of XR applications in recreating the tourism experience allows multi-stakeholders to overcome travel restrictions and lockdowns, thus, allowing the pandemic to act as an accelerator of existing trends for XR adoption.

Extended Reality (XR) Market Trends

Virtual Reality Segment to Drive the Market

Virtual reality involves the usage of computer technology to create a simulated environment. Unlike the traditional user interface, VR places the user inside an experience. This means that, instead of viewing a monitor screen in front of them, users are immersed in and can interact with a three-dimensional world. With the simulation of as many senses as possible, such as vision, touch, hearing, and smell, the usage of this technology has been transformed.
Moreover, across various educational fields, teachers have been increasingly turning to virtual reality technology to help provide a better standard of education. For instance, on a basic level, the introduction of VR in the education sector has enabled the students to be immersed in a VR environment far from the confines of the physical classroom. The technology also gives students a more visual and absorbing lesson, which can be provided at lower costs.
Virtual reality technology has also carved its space within the gaming industry in the past few years. VR has given shape to a new generation of gaming that is giving the players immersive, first-person perspective experiences. In the past few years, developers such as Oculus and HTC have worked toward making virtual reality more accessible and affordable. Previously, Oculus launched its Oculus Quest, which is a standalone wireless virtual reality headset.
Moreover, the growing pervasiveness of AI technology across VR applications is also enhancing the intelligence of virtual characters. Google's machine learning tools add 6DoF controller-tracking capabilities to any standalone headset, while Facebook's DeepFocus framework makes use of AI to create focus effects in VR, and LG makes use of AI to minimize motion sickness among VR users. The Chinese tech leaders Baidu and Tencent are also working on integrating AI and VR into mobile solutions and video games.
Cloud technologies are also promising scalability to the VR vendors. As VR-generated data is increasing in volume, the cloud services will store apps, data, and memory in virtual servers and will stream them on-demand. This is also expected to drive innovation in VR and service updates in an uninterrupted cycle.
The healthcare industry also adopted VR technology in an intrinsic manner where some of the high-grade institutions have been using the images that a computer has generated to do multiple types of diagnoses. The virtual reality simulations make use of these diagnostic images from the CAT scans to form various 3D models of a patient's anatomy. The high-tech virtual reality models are helping surgeons, primarily to ensure the position of any tumor or cyst.

North America is Expected to Hold a Significant Market Share

The North American segment of the extended reality market is expected to grow significantly over the forecast period, primarily due to the presence of multiple vendors, such as Microsoft and Qualcomm, among others, making considerable investments in

market innovations. Countries such as the US have been among the highly innovative Augmented Reality (AR), Virtual Reality (VR), and Mixed Reality (MR) markets. Most companies developing these technological advancements are based out of the US. Higher technology exposure and ease of smart devices have created strong demand in the region. Microsoft's AR product, Hololens, first released in the US and Canada, received a positive response from users.
As AR technology becomes more innovative and business applications are expanding in the region, the demand and investments in the regional AR market might increase further. For instance, in December 2021, HTX Labs, a provider of immersive learning solutions, declared that it had been awarded a new Small Business Innovation Research (SBIR) Phase II contract by the US Air Force's 821 Contingency Response Squadron (CRS). SBIR contract seeks to expand the company's EMPACT immersive training platform to enable the better development, creation, deployment, and measurement of immersive environments and interactive, virtual training content, in support of global mobility operations for the 821 CRS. The company's primary goal is to adapt its EMPACT Platform to enable Airmen to rapidly create large-scale, geospatially accurate virtual environments, augment and annotate those environments with 3D objects and other digital media and save and publish these environments for use in mission planning.
Additionally, end-user industries such as education and the corporate sector have shifted their focus toward technology, which aids them in creating an engaging environment. For instance, the United States Department of Education makes use of virtual reality primarily to help students with autism and learning disabilities in schools across the nation. Moreover, previously, the office of special education and programs announced an investment of USD 2.5 million toward a program that will also use VR to nurture social skills in students with disabilities.
According to the GSMA, the number of smartphone subscribers in the North American region is expected to reach 328 million by 2025. Moreover, by 2025, the region is also expected to witness an increase in the penetration rates of mobile (86%) and internet (80%), recording the second-highest rates globally. As smart devices, especially smartphones, play a major role in the development of AR technology, the region offers a huge opportunity for the market studied over the forecast period.
Furthermore, in the United States, the COVID-19 pandemic helped to build consumer education on the value of XR experiences. According to Forbes, in 2021, 58.9 million people will use virtual reality, and 93.3 million people will use augmented reality at least monthly in the United States.

Extended Reality (XR) Market Competitor Analysis

The Extended Reality (XR) Market is concentrated and consists of a few players. Some players are expanding their services across the emerging market to gain a market share. However, with advancements in immersive technology trends across the virtual platform, new players are increasing their market presence by enhancing their services and expanding their business footprint across emerging economies.

December 2021 - Oppo unveiled the Air Glass, Augmented Reality (AR) glasses that feature a Cicada Wing Design and an internally developed Spark Micro Projector. The Air Glass offers diffraction, waveguide display that supports touch, voice, head tracking, and gestures. The frame uses a monocle design for the glass, with an attachable AR-capable display that latches on to existing prescription glasses. Furthermore, integration with the rest of its ecosystem has enabled the company to enable seamless consumer experiences. For instance, when an Air Glass is paired with an Oppo Watch 2, users can use hand movements to confirm, cancel, and switch application cards.
December 2021 - Solotech acquired XR Studios, a full-service agency specializing in extended reality, comprised of augmented reality technology for live broadcast and virtual productions. As part of the strategic plan, XR Studios will continue to operate as a separate entity and brand, progressing its strong trajectory in market leadership. The transaction accelerates the path of Solotech and XR Studios' visions to become the leading provider of extended reality solutions globally.
November 2021 - Immersivecast announced the XR Metaverse Workspace, a service environment that supports multi-dimensional Web 3.0 with NFT, AR, and VR and simplifies the content development process. The offering was revealed on an initial 5G network

slicing trial with Deutsche Telekom, Samsung, and Ericsson at MWC 2021. It encouraged the company to expand its market presence in Korea and the US.
September 2021 - Facebook Inc. announced that it would invest USD 50 million to work with organizations to sustainably construct the so-called Metaverse, a digital world in which people may move and communicate in a virtual environment using various devices. The corporation has invested extensively in virtual reality and augmented reality, creating Oculus VR headsets and working on AR glasses and wristbands. The money will be invested globally over two years by the new XR Programs and Research Fund to ensure that Metaverse technology is developed in a way that is inclusive and empowering.

Additional Benefits:

The market estimate (ME) sheet in Excel format
3 months of analyst support

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