

India's XR Landscape: Present Dynamics and Future Opportunities



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Executive Summary

India's extended reality (XR) market is moving from an import-led category towards an enterprise-focused market with a growing domestic design and manufacturing base. Counterpoint Research estimates that the market, including hardware, accessories, software, content and associated services, reached INR 18.9 billion in 2025 and is expected to expand to over INR 43 billion by 2030, representing a CAGR of 18%. Growth will be driven by practical deployments in manufacturing, education, healthcare, entertainment, defence and other public-sector applications rather than by a purely consumer-led adoption cycle.

Hardware will be the fastest-growing layer of the ecosystem. Annual XR headset shipments are forecast to reach 151,000 units in 2030 at a CAGR of 27%, while wholesale hardware value is expected to rise to INR 9 billion from INR 2 billion. VR and mixed-reality headsets will remain the larger category by volume, but display-enabled AR glasses will contribute an increasing share of both shipments and value as lighter devices become available for consumer and professional use.

Enterprise demand, which accounted for 95.4% of ecosystem value in 2025, is expected to remain dominant, although its share is projected to moderate to 87% by 2030 as consumer adoption broadens. Manufacturing and Industry 4.0 are the largest sectors, with their market value forecast to rise to INR 14.2 billion in 2030 from INR 7.6 billion in 2025. The education and academic training sector follows, growing from INR 6.5 billion to over INR 10.5 billion. Entertainment, defence and residual public-sector applications are expected to grow more rapidly from smaller bases, while healthcare adoption will remain dependent on evidence, budgets, integration and procurement cycles.

The hardware market is concentrated but opening gradually. Meta accounted for 74.4% of 2025 XR shipments and 69.9% of hardware value, while domestic OEM QWR raised its India VR shipment share from 12.6% in 2025 to an estimated 42.5% in 2026. The gain was driven by enterprise and education programmes that require certified devices and fleet management.

India's strongest current capabilities lie above the component layer – software and content development, enterprise integration, AI, application engineering and managed services. Processors, memory, displays, sensors and precision optical components will remain import-dependent in the near term. Domestic device design, firmware, optics and certification can progressively raise local value capture. QWR's model illustrates this: it keeps device architecture, firmware, optical design and test specifications in-house, runs its own production capacity, and contracts assembly to Tier-1 EMS partners like Kaynes Technology and Syrma SGS. Kaynes' Mysuru facility targets waveguide production, optical calibration and XR assembly at one site.

The outlook is positive but execution-sensitive. Higher memory and component costs, exchange-rate exposure, irregular tenders, long enterprise sales cycles and changes in OEM strategy may create year-to-year volatility. Sustainable growth will depend on moving from pilots to repeatable multi-year deployments, prioritising use cases with measurable operational value, supporting device-agnostic software and open standards, strengthening formal distribution and after-sales service, and building deeper local design and manufacturing capability. If these conditions are met, India can develop into both a major enterprise XR market and an export base for immersive solutions and head-worn computing.

Scope, Definitions and Research Methodology

Scope of the Report

This report examines the development of India's extended reality (XR) ecosystem between calendar years 2023 and 2030, with historical estimates covering the 2023-2025 period and forecasts covering the 2026-2030 period. It assesses the market across hardware, accessories, software, content and associated services, while examining how demand differs between consumer and enterprise applications.

The report covers the principal economic layers of India's XR ecosystem – device shipments and installed base; hardware and accessory revenue; paid applications, games, subscriptions and in-app purchases; enterprise software and content licensing; annual maintenance contracts; training and workshops; custom-content development; location-based entertainment; and relevant government and private-sector project spending.

All years refer to calendar years unless stated otherwise.

Definition of Extended Reality

Extended reality, or XR, is used as an umbrella term covering virtual reality, mixed reality and augmented reality devices and applications.

Virtual Reality (VR): Headsets or head-worn devices that substantially or fully obscure the real world (RW). Wearers experience a full, digitally created environment. External cameras may feed details of the RW to assist wearers' safe usage. Additional haptic and audio features enhance the sensory experience. VR devices cannot be worn safely while moving around in free space. Primary use cases include gameplay, training and education.

Mixed Reality (MR): VR devices that use **color video-see-through (VST) technology** to feed RW views to the wearer and combine them with digitally created environments. The purpose is to present convincing syntheses, or combinations, of real and digital objects. However, MR devices cannot be worn safely while moving around in free space, and because the real-world view is camera-mediated rather than optical, the wearer's vision is fully blocked if the device loses power. Primary use cases include advanced simulation for training and education, gameplay and product design.

Augmented Reality (AR): Head-worn devices that allow users to experience a computer-generated overlay of digital information or images over the visibility of the real world. Digital artifacts are superimposed on the real-world view through a transparent lens.

Standalone XR devices: Standalone devices contain their own processor, battery, storage, displays, sensors and operating system. They can deliver an XR experience without being continuously connected to a PC, console or smartphone.

Tethered XR devices: Tethered devices depend on an external computer, console or other computing device for processing and content rendering. The connection may be wired or wireless.

3DoF headsets: 3DoF headsets track head rotation only and are worn seated or standing in place. Typical use cases include 360° video, virtual classrooms and curriculum content, guided tours, induction and orientation modules, and media playback.

6DoF headsets: 6DoF headsets additionally track movement through space and support hand interaction. Typical use cases include equipment and machine-operation simulation, safety and procedural training, clinical and surgical rehearsal, design review, and gaming. Mixed-reality devices are 6DoF by definition, since passthrough requires positional tracking.

AI glasses: Camera-and-audio smart glasses without a visual display are treated as an adjacent wearable-AI category rather than part of the core AR hardware estimates. However, they are discussed where relevant because they influence

consumer awareness, developer activity, component investment and the long-term evolution of display-enabled AR glasses.

Treatment of AI glasses: This distinction is necessary because AI glasses and AR glasses currently have different component structures, price points and use cases. Camera-and-audio AI glasses primarily support voice assistance, photography, audio, translation and contextual AI services. Display-enabled AR glasses add a visual interface and require more complex optics, display engines, thermal management and power systems. Display-less AI glasses are not covered by this report.

Market Measurement Framework

The report measures India's XR market using six principal indicators:

1. **Shipments:** Shipments refer to units sold or dispatched by the manufacturer/OEM to a distributor or channel partner (sell-in). They do not represent sales to the final customer or end user. Brand share reflects the selling brand, while manufacturer totals include both branded and ODM units.
2. **Installed base:** The estimated number of XR devices remaining operational in India at the end of each calendar year. The installed base is calculated by adding annual shipments to the previous year's active base and deducting devices that are retired, replaced, damaged or otherwise removed from active use.
3. **Wholesale market value:** The estimated value earned at the manufacturer, importer or principal supplier level. It is distinct from retail gross merchandise value and excludes downstream retail margins unless those margins form part of an integrated solution or project contract.
4. **Average selling price:** Hardware ASP represents wholesale hardware value divided by shipments. Changes in ASP may reflect official product-price revisions, currency movement, product mix, storage configuration, promotional activity and shifts between consumer and enterprise procurement.
5. **Ecosystem market value:** The combined revenue generated by hardware, accessories, software, content and related services across consumer, education, healthcare, manufacturing, entertainment, defence, government and other private-sector applications.
6. **Churn rate:** The estimated rate at which XR devices become inactive or are replaced during their useful life. Churn is modelled at the brand level, reflecting differences in product quality, lifecycle, warranty and vendor support, while being assumed constant across sectors.

Values are primarily presented in INR million or INR billion. USD values are provided for international comparison.

End-User and Channel Classification

Hardware is classified according to its final use rather than the commercial label attached to the device or the channel through which it was purchased. For example, a consumer-version Meta Quest headset purchased through an electronics retailer or online marketplace is counted as an enterprise shipment if it is ultimately deployed in a factory, university, training centre, hospital or government project. Conversely, a device purchased by an individual for home gaming remains part of the consumer segment.

Government expenditure is classified separately under the government and residual public-sector applications category. It is excluded from education, healthcare, manufacturing and defence estimates to prevent double counting.

Research and Estimation Approach

The estimates are developed by triangulating multiple sources with inputs including import and cross-border trade analysis, company and product information, retailer and distributor checks, government tender records, installed-base estimates, primary interviews with over 30 industry participants across OEMs, distributors, systems integrators and institutional buyers, channel discussions and secondary research. Brand-level 2026 estimates are cross-checked against import records, tender awards and channel checks.

Hardware estimates are constructed at the brand and device-category level before being allocated between consumer and enterprise applications. Sector-level hardware deployments are then reconciled with total shipments to ensure that individual vertical estimates do not exceed the national market.

Software and services estimates use the relevant installed base, adoption rate, annual licence or content fee, paid-user share, accessory attachment rate, project volume, ticket size and maintenance expenditure assumptions. Government and defence estimates additionally consider tender timing, project approval cycles and the exceptionally high volatility associated with large public procurements.

Global XR Market Development Trends and Growth Potential for India

Over the past two decades, the XR market has been highly dynamic, eventually entering a more disciplined phase. The sector's first decade featured rapid hardware advances, ambitious platform visions, and many experimental deployments. Its next phase will be determined less by novelty and more by whether XR can solve repeatable industry problems at an acceptable total cost of ownership.

This transition is especially important for India. Unlike markets where XR adoption was initially driven by consumer gaming, India's opportunity is predominantly enterprise-led. Training, education, manufacturing, defence, healthcare and location-based experiences account for most current spending. Consumer adoption remains comparatively small, but it is expected to accelerate as devices become more accessible, augmented-reality form factors improve and AI-enabled glasses broaden the addressable user base.

Counterpoint Research estimates that India's XR market, covering hardware, software and associated services, will increase from approximately INR 18.9 billion in 2025 to INR 43.6 billion by 2030, representing a CAGR of 18%. Hardware shipments are expected to rise more rapidly, at a CAGR of 27%.

A larger share of future shipments will come from relatively affordable consumer devices and lightweight AR products, while high-value enterprise software, content and implementation services will continue to form the economic foundation of the Indian market.

Overview of Global XR Market Development Trends

Between 2016 and 2019, VR and AR followed distinct commercial paths. VR gained visibility primarily through consumer gaming, while AR products such as Microsoft HoloLens and Google Glass targeted enterprise applications. However, high costs, hardware limitations and immature content ecosystems prevented broad commercialization, leaving most enterprise deployments at the pilot stage.

These early systems faced several barriers. Tethered headsets required powerful computers, standalone devices offered limited processing capability, content libraries were fragmented and the cost of developing custom applications was high. Device weight, motion discomfort, battery life and the absence of established deployment standards also restricted sustained use.

Standalone VR headsets began emerging in 2016 and became the dominant mainstream form factor from around 2018, reducing setup complexity and dependence on external computers. During 2020-2021, the pandemic accelerated demand for remote training, virtual collaboration and digital demonstrations, while affordable devices, particularly Meta's Quest series, expanded adoption among consumers, developers and enterprises.

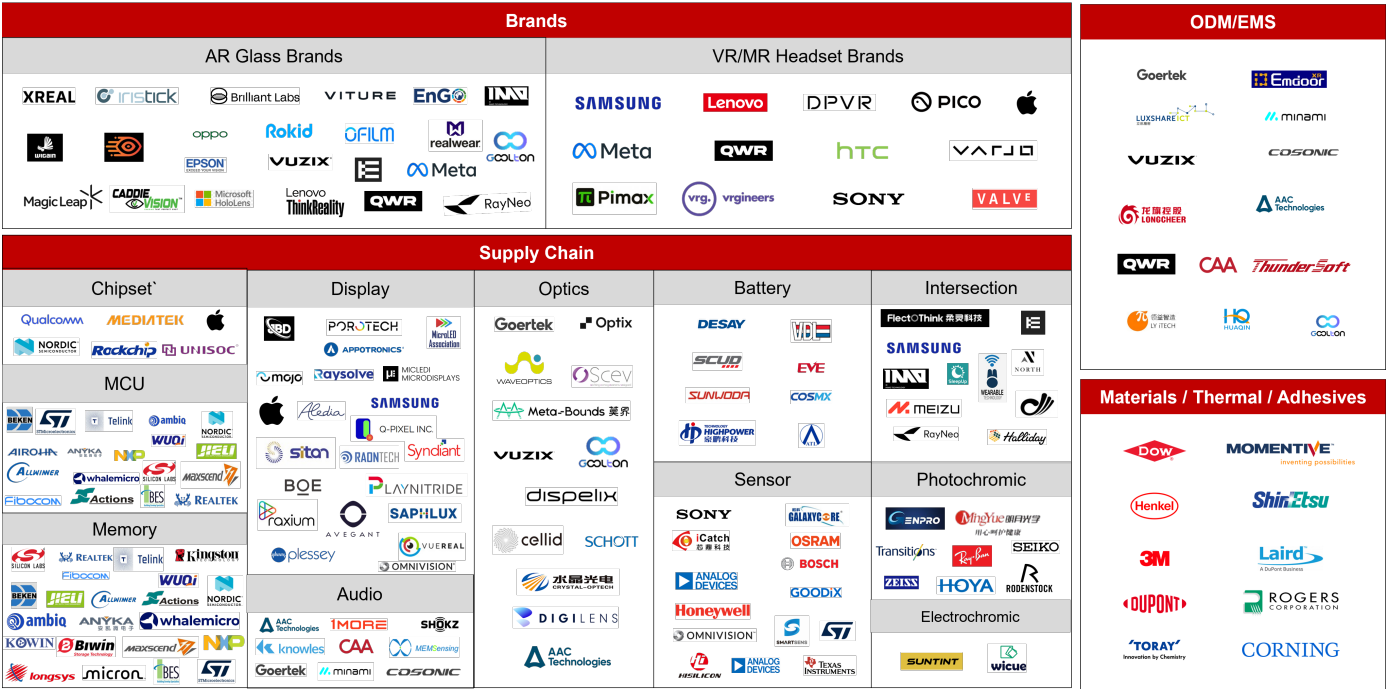
However, the rapid expansion of this period also created expectations around rapid mainstream consumer adoption, broader enterprise deployment and the emergence of new XR device categories that were not fully supported by the maturity of the technology or its content ecosystem. From 2022 onward, the market entered a correction phase where enterprises reduced speculative projects, consumers adopted longer replacement cycles, and several platform providers reassessed the timing and scale of their XR investments. According to [**Counterpoint Research's Global XR Shipment Tracker**](#), global VR headset shipments declined by approximately 18% YoY in Q2 2026.

This decline does not indicate that XR has lost commercial relevance, but the market is becoming more selective. Buyers are shifting from general "metaverse" experimentation towards use cases with identifiable operational benefits, such as:

- Reducing the time and cost required to train employees
- Simulating dangerous or expensive working environments
- Improving design review and engineering collaboration
- Supporting remote maintenance and field operations
- Visualising complex medical, industrial or scientific information
- Delivering differentiated location-based and educational experiences

The present market is therefore smaller than some early industry forecasts, but its foundations are more durable. The central question has shifted from whether an organisation should experiment with XR to whether a proposed deployment can improve productivity, safety, learning outcomes or customer engagement at scale.

Chart 1: Global XR (AR/VR) Hardware Ecosystem



Source: Counterpoint Research

The market is separating into headsets and glasses

The VR/MR headsets are highly suited to gaming, simulation, training, design review and other visually intensive applications. Improvements in colour passthrough, pancake optics, hand tracking, spatial mapping and standalone processing have expanded their utility. Nevertheless, weight, social acceptability, battery life and the need to isolate the user from the physical environment continue to limit all-day usage.

The second group comprises smart glasses and optical see-through AR devices. These products aim to integrate digital assistance into the user's normal field of view. Their development is being supported by advances in micro-displays, waveguides, voice interfaces and on-device AI. Notably, **Counterpoint's AR Smart Glasses Tracker** shows the global AR glasses market grew approximately 138% in Q2 2026, illustrating the shift in industry attention towards lighter form factors.

AI glasses may expand consumer familiarity with wearable computing, but display-enabled AR devices still face substantial optical, thermal, battery and cost constraints. Consequently, the near-term market is likely to be characterised by coexistence rather than the immediate replacement of headsets by glasses.

AI is changing both the interface and the economics of XR

Generative and multimodal AI are becoming central to spatial computing, enabling more natural, context-aware experiences and reducing the time and cost required to create 3D assets, training scenarios and virtual environments. Supporting hardware is also advancing; Qualcomm's Snapdragon Reality Elite delivers 48 TOPS of AI performance, allowing more workloads to run directly on XR devices. Gemini is embedded at the core of Android XR, enabling the operating system to understand what users see and hear, support natural multimodal interactions and take context-aware actions across headsets and glasses. Support for Android Studio, Unity, OpenXR and ARCore could further lower development barriers, although adoption will still require reliable hardware, enterprise-grade device management, secure application distribution and a sufficiently large installed base.

Memory inflation has interrupted the expected affordability curve

AI-infrastructure demand has tightened global memory supply, with [Counterpoint Research's Memory Price Tracker](#) showing smartphone memory prices rising about threefold in nine months – a useful indicator for the mobile DRAM and NAND used in standalone XR devices. Flagship standalone VR headsets typically start with 8GB of DRAM and require more memory than lightweight AR glasses due to dual-eye rendering, 6DoF tracking and colour-passthrough processing. Sustained memory inflation will raise device costs, pressure OEM margins and keep XR prices elevated, particularly in import-dependent markets such as India.

Higher memory prices will not translate directly into an equivalent increase in headset prices because memory is only one part of the bill of materials (BoM), but higher-capacity devices will face greater cost pressure. OEMs will need to absorb the increase through lower margins, reduce subsidies, simplify their product portfolios or raise prices. [Meta's April 2026 price increase](#) of \$50-\$100 for selected Quest 3 and Quest 3S models demonstrates that this pressure is already reaching buyers. PICO also implemented pricing adjustments across its headset range from July 1, 2026, as confirmed by UK XR distributor RedboxVR. DPVR followed with a \$50-per-unit price increase across its standalone VR headset lineup effective October 1, 2026, explicitly attributing the adjustment to rising UFS storage costs. In India, import dependence, exchange-rate movements, duties, taxes and channel margins will amplify the impact. Consumers may delay purchases or choose lower-storage models, while enterprises may reduce fleet sizes and adopt phased deployments. As the memory supply will remain tight beyond 2027, XR average selling prices (ASPs) are likely to remain elevated, replacement cycles will lengthen and shipment growth may slow even as total market value continues to increase.

Enterprise XR procurement is shifting to new channels

Meta's January 2026 decision to discontinue new sales of commercial Quest SKUs and Horizon managed services sharpened its focus on a consumer-first product and channel strategy. Enterprise demand did not disappear; it moved towards suppliers structured around institutional requirements. Meta continues to support existing customers and remains active in VR hardware, but enterprises must increasingly source consumer Quest devices through retail and distribution channels. Device management, application deployment, integration and support are consequently shifting towards third-party software providers and systems integrators, reshaping enterprise spending and opening the enterprise segment to Samsung (Android XR), PICO, HTC and domestic OEMs.

Growth potential of India's XR industry

Enterprise deployments accounted for approximately 95.4% of India's XR ecosystem value in 2025, led by manufacturing and education, with additional demand from defence, healthcare and government. Use cases include safety and technical training, machine familiarisation, virtual laboratories, simulation and design visualisation. Enterprise value extends beyond headset shipments to customised software, 3D content, integration, device configuration, implementation and maintenance. Although consumer adoption will reduce the enterprise share, enterprises are still forecast to represent over 87% of ecosystem value in 2030, keeping India predominantly enterprise-led.

AR and consumer devices will become incremental growth engines

Consumer and AR adoption will become increasingly important despite starting from a small base. Consumer ecosystem value is expected to rise from INR 0.85 billion in 2025 to INR 5.8 billion in 2030, lifting its market share from 4.5% to 13.4%. Display-enabled optical see-through AR shipments are expected to reach almost 42% of XR hardware shipments by 2030, supported by improving affordability, displays, batteries and applications. VR and MR will nevertheless remain larger in 2030, retaining their advantage in immersive training and simulation.

India's strongest opportunity lies above the component layer

India remains dependent on imported XR processors, memory, micro-displays, sensors and precision optics, and deeper localisation will require significant investment, domestic intellectual property and scale. To address these hardware dependencies, domestic OEMs such as QWR use a design-led manufacturing model: device architecture, firmware, optical design, calibration and test specifications stay in-house alongside owned production capacity, while VR and AR assembly is contracted to separate EMS partners, such as Kaynes Technology and Syrma SGS. Separating the two lines

reflects their different bills of materials, optical tolerances and test regimes, a structure used by global OEMs that keep IP in-house and scale through contract manufacturers.

2026 ECMS (Electronics Component Manufacturing Scheme) approvals covering PCBs, camera and display modules, lithium-ion cells, connectors and enclosures are strengthening the adjacent electronics supply chain. As India still lacks XR-grade processors, memory and display fabrication at scale, near-term value capture will remain concentrated in device design, firmware, AI, software, 3D content, localisation, device management and systems integration, complemented by selective manufacturing of assemblies, enclosures, accessories, charging systems and specialised peripherals. These capabilities are particularly important for customised enterprise deployments, but final assembly alone will not eliminate exposure to imported-component inflation; long-term competitiveness will depend on optical yields, certification, deeper engineering and component capabilities, domestic IP, policy support and sufficient domestic and export volumes.

Section 1: Global XR Landscape and India’s Strategic Readiness

The global XR OEM landscape spans standalone MR headsets and lighter display-enabled AR glasses. Meta, Apple and Samsung are influential in standalone MR, positioning their latest products around immersive spatial-computing experiences, while Google supports this direction through Android XR. PICO, HTC, DPVR and Varjo address gaming, enterprise and specialised simulation applications, while XREAL, Rokid, Vuzix and RayNeo focus on lighter AR form factors.

Chart 2: Global XR Value Chain and India’s Strength

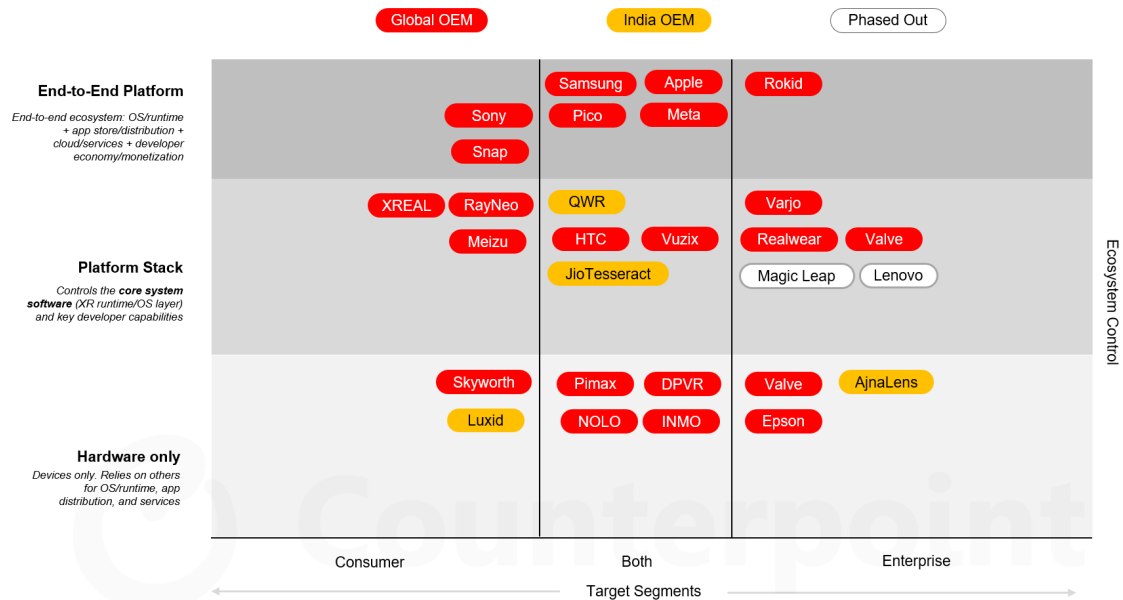
Value chain	India’s Strength Layer	
XR content and application development	Strong	Large software and 3D-development base; capabilities transferable across devices and markets
Vertical solutions and systems integration	Strong	Growing experience in education, training, manufacturing, healthcare and defence deployments
Industrial design, firmware and reference-device engineering	Developing	Present among a small group of domestic OEMs and engineering teams
Calibration, reliability testing and specialized repair	Developing	Requires greater access to XR-specific equipment, procedures and trained technicians
PCB assembly and final device manufacturing	Moderate	India has an expanding EMS base, but sustained XR volumes remain limited
Precision optics and waveguides	Early Stage	Initial partnerships and investments are underway; production yields and scale remain key challenges
Displays, XR processors and memory	Weak	Predominantly import-dependent and unlikely to localize materially during the forecast period

India's advantage lies in engineering-led enterprise hardware and software at competitive cost, backed by data control, compliance and in-country support. The same attributes carry into export markets that require trusted, traceable supply chains. This is especially valuable in education, manufacturing, healthcare and defence, where buyers require customised applications and reliable lifecycle support. Over time, enterprise demand can provide the scale needed to strengthen local device design, component sourcing and manufacturing.

1.1. OEM Mapping

Meta retains the strongest presence in affordable standalone VR but has deprioritised its enterprise proposition. Quest devices remain in enterprise deployments through retail channels, while spending redistributes towards independent device-management providers and domestic OEMs supplying certified devices with warranty and fleet support.

Chart 3: Global and India XR OEM Mapping



Apple has established a premium benchmark through Apple Vision Pro and its VisionOS. Its high price limits near-term shipment potential in India, but the platform is relevant for design, visualisation, healthcare, media and enterprise applications where display quality and integration with Apple devices are more important than cost.

Samsung’s Galaxy XR, launched in October 2025, is the first commercial headset based on Android XR. In April 2026, Samsung added Android Enterprise support, Samsung Knox management and up to five years of security updates. This makes Android XR more suitable for enterprise deployments and provides an alternative to Meta’s ecosystem.

PICO, HTC, DPVR and Varjo address different parts of the professional market. PICO and HTC support standalone enterprise deployments, while DPVR has a presence in education and location-based entertainment. Varjo focuses on high-resolution simulation for aviation, defence, automotive and other specialised industries. These companies compete for the enterprise segment, although their Indian distribution and service networks remain limited.

India’s domestic XR hardware ecosystem is led by QWR, whose share of VR headset shipments is estimated to rise from 12.6% in 2025 to 42.5% in 2026. QWR offers a diversified portfolio spanning VR headsets (QVR), display-enabled AR glasses (QXR) and AI wearables (QAI), supported by a unified software stack and HUMBL, its proprietary voice-first AI platform. The company combines in-house product design and manufacturing capabilities with outsourced assembly, serving both its own brand and global customers through ODM partnerships. Its products carry BIS, FCC, CE and UKCA certifications, supporting domestic and international market access. Other notable Indian OEMs include JioTesseract in consumer MR, AjnaLens in defence and enterprise MR, and Luxid in AR glasses. Domestic manufacturers are increasingly differentiating themselves through engineering capabilities, competitive total cost of ownership, certified manufacturing and localized after-sales support.

1.2. Component and Manufacturing Ecosystem

XR devices depend on a complex combination of processors, memory, displays, cameras, motion sensors, optics and software. These components must operate within strict limits for weight, heat, battery consumption and latency.

Chart 4: Global XR Component and Manufacturing Ecosystem

Layers 	Players 	Strategic Role 
XR processors & compute	Qualcomm, Apple, MediaTek	Graphics, tracking, passthrough, connectivity and on-device AI
Memory & storage	Samsung Electronics, SK hynix, Micron, Kioxia and SanDisk	Application performance, operating-system capability and local content storage
Displays & display engines	Sony Semiconductor Solutions, BOE, SeeYA, JBD, Kopin and Samsung Display	Resolution, brightness, clarity, FoV, power efficiency and form factor
Cameras & sensors	Sony, OmniVision, STMicroelectronics and Bosch Sensortec	Passthrough, spatial mapping, hand tracking, eye tracking and environment recognition
Lenses & optical modules	Goertek, Sunny Optical and specialist optical-system suppliers. Lumus, DigiLens, Kaynes, Dispelix, and other specialist suppliers	Resolution, clarity, FoV, eye box, power efficiency and device thickness
Electronics manufacturing & assembly	Goertek, Luxshare, Foxconn, Pegatron and other EMS/ODM companies	PCB assembly, component integration, calibration, testing and final production
Development engines & runtime tools	Unity, Epic Games, Apple, Google, Meta, Qualcomm and Khronos	Application development, rendering and cross-device compatibility

India remains dependent on imported XR processors, memory, micro-displays, sensors and precision optics. Rising memory prices therefore affect locally assembled and imported devices alike. Lower-volume XR OEMs worldwide pay more for components than smartphone makers, a gap that multi-SoC platforms and shared BoMs across product lines partly offset.

In 2026, the government approved Electronics Components Manufacturing Scheme (ECMS) projects covering PCBs, camera and display modules, lithium-ion cells, connectors, enclosures and other components. These investments are not exclusively for XR, but they can gradually create a stronger local supplier base for headsets and smart glasses.

Chart 5: India's Strategic XR Hardware Manufacturing Roadmap and Readiness

Phase 1:
Market Emergence and Capability Building

2026 – 2027

- XR device assembly in India with strong testing and calibration (enterprise headsets and AI+AR smart glasses first)
- **Make more basic parts locally:** frames/enclosures, cables, speakers/mics, packaging, simple camera parts
- Set up shared labs for quality tests (EMI/EMC, drop/heat/sweat, optics checks) so smaller OEMs can use them
- Begin optics pilot work (waveguides + optical alignment) to learn yield and process control

Phase 2:
New Entrants, Localisation and Export Readiness

2028 – 2029

- **Move to module manufacturing:** full camera modules, better PCBs, battery packs, connectors, sensor modules
- Scale optics production with better yields and standard measurement/QA (key step for AR devices)
- Use growing India chip packaging/testing capacity to reduce delays and add more local electronics content
- **Build export-ready production:** full traceability, failure tracking, standard calibration, spares + service setup

Phase 3:
Export Scale-up and Ecosystem Maturity

2030 and Beyond

- India becomes a credible export manufacturing base for selected XR categories (AI/AR smart glasses + enterprise headsets)
- Availability of a full repair + refurb ecosystem for enterprise fleets
- Develop India-made reference designs for AR smart glasses and enterprise XR headsets
- Expand government + defence grade production lines with stricter QA and traceability
- Involvement of more design partnerships

1.3. Hardware Certifications and Compliance

Certification has become more important following the formal inclusion of XR products in India's electronics-safety framework. The Bureau of Indian Standards (BIS) now lists AR, VR and MR products under the Compulsory Registration Scheme, with compliance based on IS/IEC 62368 Part 1:2023.

Chart 6: India's Key Hardware Certifications and Compliances

Compliances	Requirements	Relevance to XR
Product electrical & electronic safety	BIS Compulsory Registration Scheme; IS/IEC 62368 Part 1:2023	Applies directly to XR products following their inclusion in the notified category
Wi-Fi & Bluetooth radio approval	WPC Equipment Type Approval	Required for wireless equipment operating in applicable licence-exempt frequency bands
Rechargeable battery safety	BIS requirements under IS 16046, where applicable	Relevant to integrated and external portable lithium-ion batteries
Power adapter safety	BIS registration for applicable IT or AV power adapters	Adapter compliance should be verified separately from the headset
Packaging & consumer declarations	Legal Metrology rules	MRP, importer or manufacturer information, country of origin and consumer-care details
E-waste responsibility	E-Waste Management Rules and CPCB EPR framework	Creates end-of-life obligations for producers and importers of covered electronic equipment
Battery waste	Battery Waste Management Rules, 2022	Manufacturers and importers carry EPR obligations for batteries introduced into the market
Personal-data protection	DPDP Act, 2023 and DPDP Rules, 2025	Relevant to camera, voice, eye-tracking, hand-tracking and user-account data
Export-market compliance	CE/RED, FCC and applicable safety, RF and optical standards	Necessary for Indian OEMs seeking to sell devices internationally

Nearly all standalone XR devices include Wi-Fi and Bluetooth, making WPC (Wireless Planning and Coordination wing) approval important for both domestic and imported models. Manufacturers must also verify the certification of batteries and charging adapters when the headset's registration does not cover all supplied components.

Privacy is also becoming a major purchasing factor. XR devices can process camera feeds, room maps, voice, hand movements and eye-tracking information. Companies should provide clear data notices, access controls, encryption, retention policies and secure device-management systems. Education deployments require additional care because they may involve children's data.

XR hardware used for general medical training does not automatically become a medical device. However, a solution marketed for diagnosis, treatment, patient monitoring or rehabilitation may fall under the Medical Devices Rules and require CDSCO approval.

1.4. XR Development Tools and OS

Meta Horizon OS has a large installed base and a mature standalone application ecosystem. Independent device-management and application-distribution tools have become more important, as have OEMs that provide these natively.

In the future, Android XR could become strategically important for India because local developers already have extensive Android experience. Google has designed the platform to support headsets and glasses while integrating Gemini and established development frameworks. However, adoption will depend on the availability of lower-priced devices and enterprise-ready applications.

Chart 7: XR Operating Systems - Key Tools and Market Position

Platform	Key Tools	Market position
 Meta Horizon OS	Meta SDKs, Unity, Unreal Engine and OpenXR	Large standalone VR application ecosystem
Android XR	Android Studio, Jetpack XR, Unity, WebXR and OpenXR	Emerging open platform for headsets and glasses
visionOS	SwiftUI, RealityKit, ARKit and Unity	Premium spatial-computing ecosystem
 PICO	PICO SDK, Unity, Unreal and OpenXR	Consumer and enterprise standalone XR
 STEAM VR	Unity, Unreal, SteamVR and OpenXR	High-performance gaming and simulation
 Snapdragon spaces	Qualcomm SDKs, Unity and OpenXR	AR and connected-glasses development
 WebXR	Browser-based development tools	Easier distribution but more limited device access
 OpenXR	OpenXR API, SDK and runtime tools	Open cross-platform XR standard

Apple's VisionOS is suitable for premium applications requiring high visual quality and integration with Apple devices. Its closed ecosystem and high hardware price are likely to limit broad deployment in India, although it can remain relevant for specialised design, medical and enterprise applications.

India's most practical opportunity is to build on its early-mover advantage in an emerging global market and leverage partnerships to build a cohesive ecosystem focused on creating an end-to-end backward-integrated supply chain.

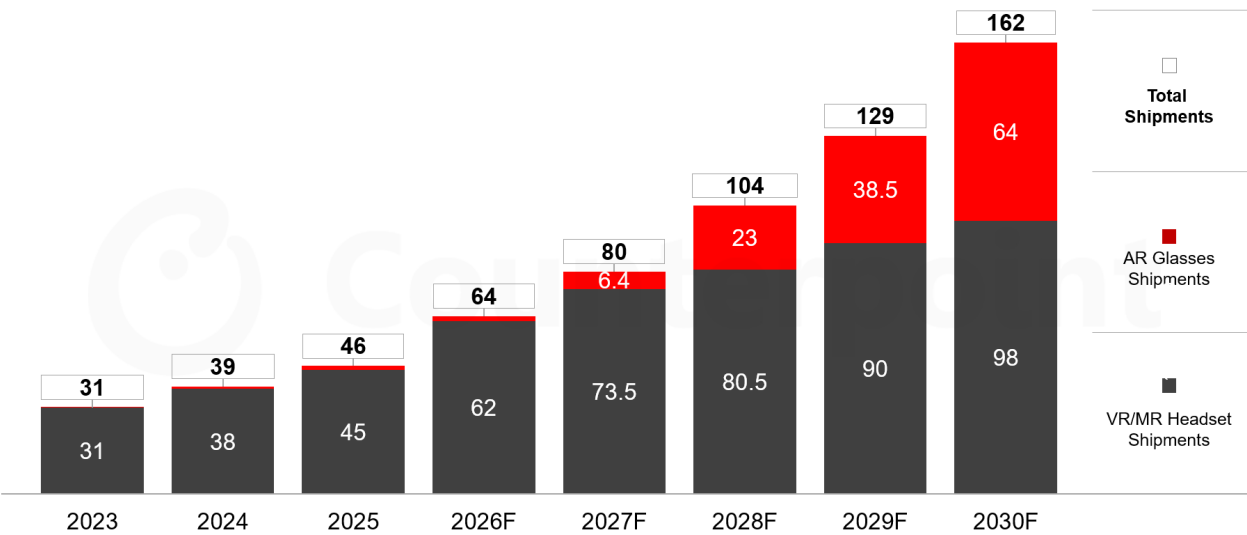
Section 2: India XR Hardware Market Sizing and Share Disaggregation

India's XR hardware market is entering a period of faster growth and broader competition. Annual headset shipments are estimated to increase at a 27% CAGR in the 2025-2030 period, while market value is expected to rise to over INR 9 billion. Growth will be supported by enterprise deployments, consumer adoption and the introduction of display-enabled AR devices. However, higher memory costs, changes in enterprise distribution, and continued dependence on imported components will affect pricing and procurement.

2.1. TAM for Headsets

India's XR headset market witnessed steady growth during 2023-2024, driven primarily by VR headset adoption, while AR glasses remained a nascent segment. Counterpoint Research estimates that India's XR headset shipments will grow at a CAGR of 27% between 2025 and 2030. Market value will grow faster, at 35%, due to rising AR adoption, higher device specifications and near-term component-price pressure.

Chart 8: India XR (AR/VR) Device Shipments (in thousands) by Type, 2023-2030



Source: Counterpoint Research's India XR Market Estimates, 2025-2030

Note: Headset value excludes accessories

India's VR and mixed-reality segment will likely grow by an average of 15% between 2025 and 2030. Wholesale hardware value is expected to grow faster, at a CAGR of 21%, from INR 1.88 billion to INR 4.8 billion, as the blended ASP rises from INR 43,103 to INR 55,201, driven by higher enterprise hardware specifications and sustained global memory (DRAM/NAND) price inflation. Growth will be primarily enterprise-led, as the enterprise share of VR/MR shipments is forecast to increase from 73% in 2025 to over 82% in 2030, supported by average annual shipment growth of 17% in manufacturing and education.

2.2. Cross-Border Hardware Trade Analysis

India's XR imported hardware supply is divided into two routes: **official imports** and **grey imports**. Official imports are brought into India by the OEM or its authorised importer and distributor, with applicable customs duties, taxes, certifications, invoices and official warranty support. Grey imports are genuine devices sourced from overseas retailers or distributors and resold in India outside the OEM's authorised channel. These products are not necessarily counterfeit, but they may lack an Indian warranty, local enterprise support or confirmed regulatory compliance. The contribution of each route varies by brand, official availability, overseas pricing and domestic supply.

Official imports are becoming more important as enterprises require GST invoices, warranties, regulatory documentation and reliable support. PICO and HTC have formalised their Indian channel through ForeExcel and Ingram Micro, while several global brands, including Meta and RayNeo, have no official Indian importer.

Parallel imports remain important for products that are not consistently available through dedicated Indian channels. They provide earlier access to new devices and support price competition, but warranty coverage, after-sales service, product certification and replacement availability can vary. These weaknesses become more important when devices are deployed as managed enterprise fleets rather than purchased individually.

Following Meta's commercial-channel change, new enterprise buyers either source Quest through consumer channels or turn to OEMs with a dedicated institutional offer; consumer-SKU purchases are classified here by end use.

Compliance requirements may gradually shift more demand towards formal distributors and domestic suppliers. The BIS now specifically lists augmented-, virtual- and mixed-reality products under the compulsory registration framework based on IS/IEC 62368-1:2023. This increases the importance of certification, product traceability and local accountability.

Local manufacturing can improve lead times, configuration control, warranty support and the ability to serve institutional orders. QWR has established in-house design and production capabilities in India, with the potential to scale manufacturing through contract assembly partnerships with Kaynes Technology, Syrma SGS and other partners. However, processors, memory, displays and several optical and sensor components will continue to be sourced internationally in the near term. Local assembly therefore reduces finished-device import dependence but does not remove exposure to global component prices.

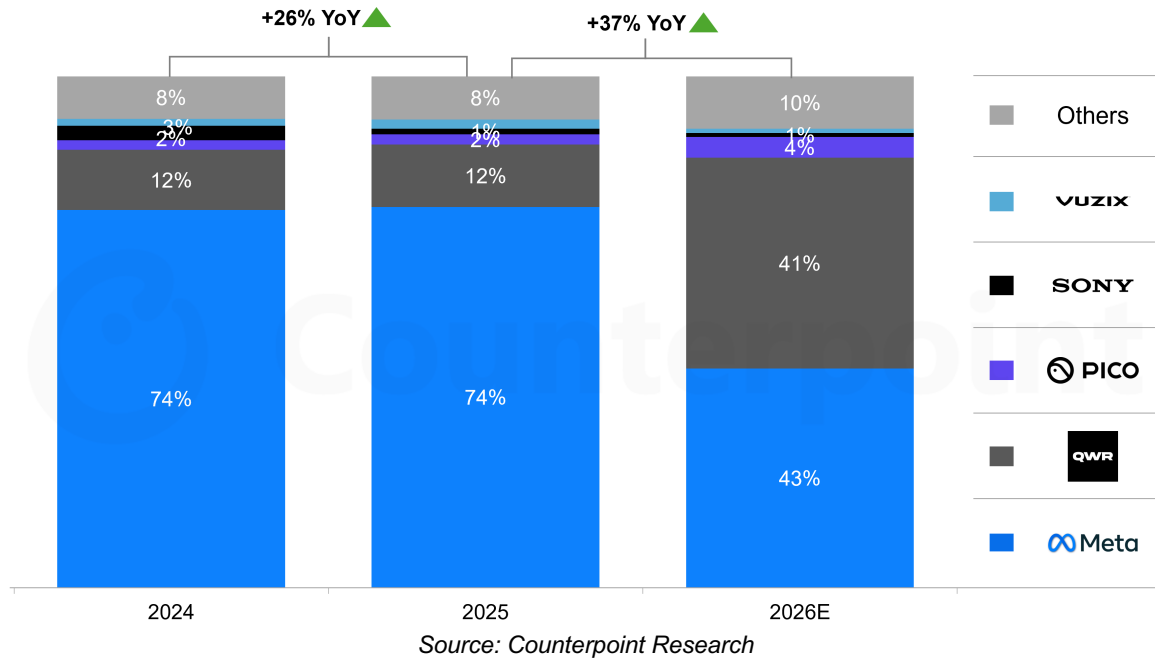
2.3. Brand/OEM Market-Share Dashboards

India's XR market was highly concentrated in 2025, with Meta accounting for 74.4% of shipments and 69.9% of hardware value. The market has become more competitive in 2026, with QWR expanding supply and Meta's dedicated commercial channel being discontinued.

Within VR alone, Meta's shipment share was estimated at 76.6% in 2025, compared with 12.6% for QWR. In 2026, the two companies are expected to be much closer, at 44.2% and 42.5%, respectively. The shift reflects QWR deployments across education and enterprise programmes requiring fleet-managed, certified devices, with Meta's enterprise channel change and BIS registration of XR products as supporting factors. Institutional contracts are large relative to the market, so annual shares can move sharply; the 2026 estimate reflects contracted and shipped volumes to date. By 2030, QWR is projected to hold 44% of India VR shipments and 47% of VR wholesale revenue, alongside Meta and PICO. These figures cover India only and exclude QWR's export and ODM volumes. QWR has established in-house design and production capabilities in India, with the potential to scale manufacturing through contract assembly partnerships with Kaynes Technology, Syrma SGS and other partners. India is gaining prominence in the global VR/MR hardware market, with QWR ranking among the top 10 VR/MR OEMs in H1 2026, making it the highest-ranked OEM headquartered outside the US, Japan and China.

The AR market follows a different pattern. Vuzix accounted for approximately 63% of AR shipments and 86% of AR value in 2025 because the category was concentrated in high-priced industrial devices. By 2030, the model assumes a broader mix led by Meta, XREAL and other consumer and enterprise glasses. Meta's AR contribution from 2027 onwards is a forecast assumption based on expected product development and should not be treated as a confirmed shipment plan.

Chart 9: India XR (AR/VR) Device Shipments by Brand, 2024 vs 2025 vs 2026E



Enterprise spending after Meta’s commercial withdrawal

The analysis shows that Meta’s dedicated enterprise segment decline is being offset by growth elsewhere rather than by a fall in total enterprise demand.

Enterprise spending is therefore moving across three areas: alternative and domestic hardware, consumer-channel Quest purchases, and third-party device management and integration. Buyers with existing Quest applications may continue purchasing consumer units, while new deployments increasingly favour OEMs offering enterprise device management, certified supply and configurable hardware.

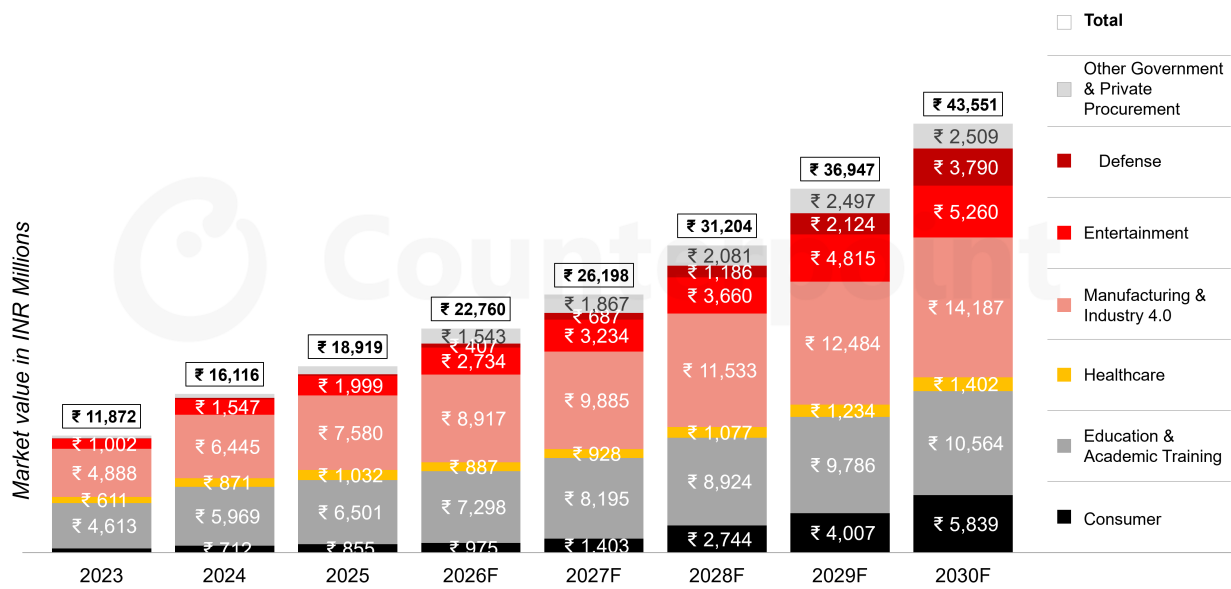
Overall, India’s XR hardware market is moving from a Meta-led, VR-heavy structure towards a broader mix of VR, MR and display-enabled AR devices. Memory prices will keep near-term hardware costs elevated, but growing enterprise demand, consumer adoption, formal distribution and domestic manufacturing should support continued expansion. The pace of growth will depend on component availability, execution of local manufacturing plans and the commercial readiness of new AR products.

Section 3: High-Potential Sectoral Applications for XR in India

India’s enterprise XR market is estimated to grow from INR 18.06 billion in 2025 to over INR 37.7 billion in 2030, representing a CAGR of 16%. Manufacturing and education will remain the largest sectors, while entertainment, defence and residual public-sector applications will record faster growth from smaller bases.

In the underlying model, government-funded XR expenditure is classified separately under government and residual public-sector applications. Defence is presented separately below for analysis, while government-funded education, healthcare and public-sector industry spending is not repeated within the corresponding institutional or private-sector categories.

Chart 10: India XR Market Value by Category



3.1 Education, Training and Skill Development

India’s XR education and training market is estimated at INR 6.5 billion in 2025 and is forecast to reach INR 10.56 billion in 2030. Market value is expected to grow despite higher device prices, supported by curriculum content, ongoing institutional contracts and vocational-training deployments.

Content and software represented more than three-fourths of sector value in 2025. Syllabus-aligned content was the largest software category, followed by foundational platforms, advanced modules and professional content. Software will remain the principal revenue layer through 2030, but its share is expected to soften over the years as hardware deployments and custom projects expand.

Custom content and project work is forecast to grow from INR 270 million in 2025 to INR 800 million in 2030. Demand will increasingly move towards institution-specific modules for engineering and vocational training. Professional education content is also expected to expand as institutions require simulations that reproduce actual equipment and working environments rather than general-purpose classroom experiences.

The main applications include immersive science and engineering laboratories, complex visualisation, equipment training, safety procedures, language learning and assessments. XR can be particularly useful where physical equipment is expensive or unavailable to every student. However, institutions must measure learning outcomes and device utilisation rather than treating the installation of a VR laboratory as the final objective.

Higher memory prices may encourage institutions to deploy fewer devices per laboratory or extend replacement cycles. Existing Quest-based laboratories can continue buying consumer devices, with fleet management handled by third-party providers.

India's education and skills ecosystem is gaining policy support, with the Union Budget 2026-27 proposing AVGC Content Creator Labs across 15,000 secondary schools and 500 colleges, backed by an allocation of INR 2.5 billion. These initiatives are expected to strengthen content-development capabilities, digital skills and XR awareness, although they may not immediately translate into headset demand. As these programmes progress toward institutional procurement, domestic OEMs such as QWR could benefit from growing demand for BIS-registered hardware, localized support and end-to-end device lifecycle accountability. QWR's in-house design, certification and production capabilities position it to compete for institutional skilling tenders and emerging government-led XR deployments.

3.2. Healthcare

India's XR healthcare market is estimated to decline from 2025 to 2026 before recovering to around INR 1.4 billion in 2030. The near-term contraction reflects lower device shipments and a pause in some simulation purchases, with higher imported-device and memory costs adding pressure to already long hospital procurement cycles.

Simulation-based medical training accounted for approximately 95% of healthcare software value in 2025. Key applications include anatomy education, surgical rehearsal, emergency-response training, nursing procedures, anaesthesia, clinical decision-making and training for equipment-intensive procedures. These applications allow students and medical professionals to repeat difficult scenarios without creating risk for patients.

The National Medical Commission's guidelines require medical colleges to establish skills laboratories that provide a safe simulated environment for learning and assessment. This creates a supportive foundation for XR, although medical institutions will still require evidence that an XR module improves skills, retention or patient safety before adopting it at scale.

Custom healthcare projects represent the sector's strongest growth opportunity. Their value is forecast to rise from INR 66.5 million in 2025 to INR 288 million in 2030, increasing their share of the sector from 6.4% to over 19%. Hospitals and medical colleges are likely to commission specialised simulations for their procedures, equipment and training protocols rather than relying entirely on standard content.

Patient-facing applications such as rehabilitation, pain management, therapy and remote clinical collaboration remain potential opportunities, but their adoption will be slower than professional training. Clinical validation, hygiene, patient data protection, integration with hospital systems and practitioner acceptance will remain important barriers. Long hospital procurement cycles and clinical continuity requirements make dedicated support, managed fleets and predictable replacement decisive for healthcare buyers, favouring OEMs that supply and maintain their own devices.

3.3. Manufacturing and Industry 4.0

Manufacturing is India's largest XR sector, representing 42% of enterprise ecosystem value in 2025. The market is forecast to grow from INR 7.58 billion in 2025 to INR 14.19 billion in 2030. It is also expected to grow by 17.6% in 2026 despite component-price pressure.

The sector is less exposed to short-term headset-price changes because hardware accounted for only 8% of its total value in 2025. Most spending is generated through software, process content, systems integration, maintenance and custom projects. Manufacturers are also more likely to approve XR projects according to operational returns rather than the standalone cost of a headset.

Safety training, machine familiarisation, equipment operation and process training remain the most established applications. Adoption is gradually moving towards AR-guided assembly, remote expert assistance, digital work instructions, quality inspection, predictive-maintenance visualisation and digital twins. This represents a shift from using XR only for workforce training towards using it within everyday production and maintenance workflows.

Advanced software modules are forecast to grow faster than basic platforms as manufacturers integrate XR with IoT data, AI analytics, maintenance systems and factory digital twins. Hardware value is also forecast to rise from INR 604 million in 2025 to INR 1.9 billion in 2030, supported by larger deployments and more frequent replacement in demanding factory environments.

The strongest business cases will be applications that reduce training time, machine downtime, travel, rework or safety incidents. Projects without measurable operational outcomes may remain limited to pilots. Manufacturing bids increasingly specify local warranty, security, device management and industrial-grade configuration, favouring OEMs capable of supplying and supporting certified devices directly.

The Ministry of Heavy Industries' SAMARTH Udyog Bharat 4.0 programme supports demonstration and adoption of technologies including AR, VR, industrial IoT, AI and robotics. Projects involving Tata Motors and Tata Steel from the private sector have also examined AR and VR for skill development and assembly-process verification.

3.4. Defence and Security

India's defence XR market is highly dependent on government tenders, programme approvals and classified procurement. Annual market value can therefore vary sharply. After an exceptionally low tender base in 2025, the market is forecast to increase from approximately INR 128.6 million to INR 3.8 billion in 2030. This trajectory should be viewed as a programme-based forecast rather than stable annual growth.

High-potential applications include flight and vehicle simulation, mission rehearsal, tactical planning, weapons and equipment training, battlefield medical training, maintenance guidance and the visualisation of complex operational environments. XR can reduce the cost and risk of live training while allowing forces to repeat rare or dangerous scenarios. Software is expected to account for approximately INR 2.3 billion of the 2030 defence market, compared with around INR 445 million for hardware and INR 1 billion for maintenance and services. The high software contribution reflects the need to reproduce specific platforms, operating conditions, terrain and mission requirements.

Defence deployments require stronger security, offline operation, restricted data access, domestic maintenance and long product-support cycles. As a result, the opportunity is more favourable for Indian suppliers and integrators that can provide locally controlled software, secure deployment and long-term support than for consumer-focused platforms alone.

The Indian Army has identified AR and VR among its priority technology clusters, while an iDEX-backed project has supported the development of an indigenous scenario and sensor simulation toolkit for pilot mission planning and large-scale force engagement.

3.5. Games and Entertainment

India's XR games and entertainment market is forecast to grow from INR 2 billion in 2025 to over INR 5 billion in 2030, representing a CAGR of 21%. The category is expected to reach INR 2.7 billion in 2026, growing by 37%.

This sector primarily measures location-based entertainment, including VR arcades, family-entertainment centres, mall attractions, immersive experience centres and ticket-related services. Consumer headset purchases are recorded separately under the consumer market and are not counted again within this category. Venue operations and ticket-related services generated more than 90% of the sector's value in 2025. The number of location-based XR centres is forecast to increase from approximately 300 in 2025 to 480 in 2030, while paid usage is projected to rise from around 3.0 million to 6.8 million hours. Ticket and service revenue alone is expected to increase from INR 1.1 billion to around INR 3 billion.

The segment benefits from allowing consumers to experience XR without purchasing a headset. Demand is supported by shopping malls, tourism locations, group events and family-entertainment centres. However, operator economics depend on utilisation, experience duration, repeat visits, content refresh and device maintenance. Higher headset and memory costs can lead operators to extend replacement cycles, increase prices or concentrate spending on devices with stronger service support.

Meta devices remain important in venues, with kiosk management and content licensing increasingly supplied by third parties. India's growing AVGC-XR talent base, including the Indian Institute of Creative Technologies and WaveX-supported startups (WaveX is a government-backed startup accelerator supporting innovation, incubation and entrepreneurship across India's AVGC-XR and media-tech sectors), should improve the availability of locally relevant experiences, although venue economics will remain the main determinant of commercial success.

3.6. Government Procurement Size and Types

Overall government procurement is expected to grow from INR 929 million to reach INR 6.3 billion by 2030. The category includes defence, government education and training, public healthcare, museums, heritage and tourism experiences, smart-city visualisation, environmental outreach, public events and specialised government programmes. Smaller private sectors such as architecture, construction, utilities, retail and e-commerce are also included where they do not fit within the main categories.

Government education is expected to remain one of the largest components, supported by public training institutions, skill missions and educational tenders. PICO's deployment across 50+ ICT VR Labs in government schools and on DoPT's Karmayogi Bharat platform shows global OEMs' presence across the public sector. Other opportunities include virtual museums, heritage reconstruction, urban-planning visualisation, disaster-response training, police and public-safety simulations and citizen-engagement centres.

The Ministry of Culture's Museum Grant Scheme explicitly supports online virtual museums, virtual experiential museums and immersive group-VR tours. Recent supported applications include an immersive VR bus for describing the Saraswati-Sindhu civilisation. These projects demonstrate how XR demand can emerge outside traditional enterprise sectors.

Public-sector demand will remain uneven because expenditure depends on tenders, budget releases and project completion schedules. Suppliers must also address localisation, accessibility, multilingual content, procurement compliance and long-term maintenance. The most sustainable opportunities will be programmes that can be reused across multiple institutions or locations rather than one-time demonstrations.

3.7. Sectoral Outlook

Manufacturing and Industry 4.0 remains the largest XR sector, growing at a 13% CAGR over 2025-2030 due to established use cases across industrial training, equipment operation and production workflows. Education remains another major opportunity, reaching INR 10.56 billion by 2030, driven by institutional deployments and growing demand for specialised content. Entertainment provides faster volume-led growth through location-based experiences to reach a 21% CAGR. Defence is projected to expand rapidly from a small base in 2025 to grow over 29x by 2030, supported by increasing government focus on indigenous simulation and training capabilities. Healthcare remains a smaller but valuable opportunity, particularly for customised medical training, while government and other public-sector applications will remain dependent on tenders and project timing. The consumer sector is expected to grow at a 47% CAGR as device adoption increases and use cases expand. Across sectors, successful deployments will combine suitable hardware with content, integration, device management, training and measurable outcomes. The strongest suppliers will be those that understand each industry's workflows and can demonstrate improvements in safety, learning, productivity, operational readiness or visitor engagement.

Section 4: Indian XR Solutions and ISV Landscape

India’s XR solutions market has moved beyond its earlier focus on one-time demonstrations, 360-degree content and promotional experiences. The current ecosystem includes enterprise training platforms, vertical simulation libraries, frontline-assistance tools, display-enabled hardware, device-management capabilities and complete institutional deployments. However, the market remains fragmented, and many providers combine software, content, hardware sourcing, integration and support rather than operating as pure independent software vendors.

This structure reflects how Indian organisations purchase XR. Most buyers are not looking for a standalone application or headset; they require a complete solution designed around a specific training, education or operational requirement. The ability to customise workflows, support regional languages, integrate with existing systems and provide on-site assistance is therefore an important competitive advantage for domestic providers.

4.1 Solution Layer Mapping

India’s XR solutions ecosystem can be divided into four broad solution layers. Individual companies may operate across multiple layers, but the following mapping reflects their principal market position.

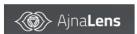
Chart 11: India Solution Layer Mapping

Solutions layer	Main Capabilities	Key Players
Hardware and device solutions	VR headsets, AR glasses, peripherals, device design, firmware and institutional hardware bundles	   
Development and deployment platforms	Content authoring, application distribution, analytics, fleet management, remote assistance and digital work instructions	  
Vertical applications and simulation content	Education, vocational training, healthcare simulation, industrial safety, maintenance and operational training	     
Experience design and systems integration	Custom XR development, digital twins, interactive installations, enterprise integration and deployment services	 

The strongest domestic capabilities are currently concentrated above the component layer. Indian companies are building software, simulation content, deployment platforms and integrated solutions around devices that may still depend on imported processors, memory, displays and optical components.

The boundaries between these layers are becoming less distinct. Hardware-led providers increasingly offer software development and vertical solutions, while software vendors may bundle headsets, installation, training and maintenance. This convergence is necessary because many Indian buyers lack dedicated internal XR teams and prefer to work with one provider for the complete deployment.

Chart 12: India XR Solutions and Platform Census

Company	Principal Position	Main Application Areas	Offering Profile
INDUSTRIAL / WORKFORCE XR			
 autovrse	Enterprise XR platform	Industrial training, safety, production	XR content, training modules, analytics, fleet management
 Simulanis	Industrial XR solutions provider	Manufacturing, maintenance, safety	XR simulations, training content, AR guidance
 CUSMAT	Industrial skilling platform	Manufacturing, mining, logistics	AR/VR/MR training, simulation, analytics
 Plutomen	Frontline-operations platform	Manufacturing, maintenance, inspection	AR remote assistance, digital work instructions
 aura interact	Enterprise XR & digital-twin developer	Manufacturing, infrastructure, workforce	XR applications, simulations, digital twins
SKILL SIMULATION & VOCATIONAL TRAINING			
 Skillveri	Skill-simulation platform	Welding, HVAC, solar, vocational training	VR/MR simulators, haptics, assessment
 SIMBOTT	Vocational skill-simulation provider	Welding, painting, heavy equipment, defence	VR/AR/MR simulators, trade training, assessment
 Aatral	Industrial safety & defence XR provider	Construction, manufacturing, aviation, defence	AR/VR safety training, repair guidance, simulators
 Parallax Labs	Immersive simulation studio	Defence, space, manufacturing, maintenance	VR/AR/MR content, maintenance & training simulations
EDUCATION & ACADEMIC XR			
 fotonVR	Education-focused XR provider	K-12 education, classroom learning	Curriculum-linked content, VR labs, teacher tools
 VR Education	K-12 VR education provider	School education	VR headsets, curriculum content, VR labs
 VRlabs	Higher-education XR provider	Engineering, medical, science	Curriculum-aligned VR content, simulations, VR labs
HEALTHCARE & CLINICAL SIMULATION			
 MEDISIMVR	Healthcare simulation platform	Medical, nursing, clinical training	VR labs, simulation content, assessment
ENTERPRISE EXPERIENCE & DIGITAL TWINS			
 IMMERSTON	Immersive-experience developer	Enterprise communication, exhibitions, brand experiences	AR/VR, volumetric capture, interactive installations
 VizExperts	VR/AR systems integrator	Manufacturing, defence, education	VR/MR applications, display systems, VR labs
XR HARDWARE & PLATFORMS			
 QWR	XR hardware, ODM and integrated-solutions provider	Education, enterprise, defence	Device design, firmware, SDKs, customisation
 AjnaLens	XR hardware & platform provider	Defence, enterprise, workforce skilling	AR/MR headsets, immersive learning platform
 TESSERACT	Consumer MR device & platform provider	Entertainment, gaming, education	MR hardware, XR content ecosystem, app platform
 LUXID TECH	Hardware-led AR provider	Productivity, entertainment	AR glasses, software, accessories
 IRUSU	VR hardware & solutions provider	Consumer VR, education	VR hardware, accessories, deployment support

Note: Companies are grouped by primary go-to-market focus; several players span multiple categories.

4.2. Independent Software Vendor (ISV) Census and Ecosystem Size

India’s XR suppliers are increasingly adopting bundled models that combine hardware, software, content, integration and support, responding to enterprise buyers seeking a single provider for complete deployments. Of the 20 companies covered in the census, 13 are primarily focused on industrial operations, vocational skilling, education or healthcare. Training and simulation remain the most common applications, extending across manufacturing, mining, logistics, defence and medical learning. The concentration reflects how Indian customers buy XR as an outcome-focused solution rather than as standalone hardware or software.

That demand has produced a market in which the traditional boundaries between software vendors, content studios, systems integrators and hardware suppliers are increasingly blurred. Most providers bundle customised software, content, headsets, installation and support into a single contract. The approach helps win early deployments but leaves revenue dependent on one-off projects, limiting margins and scale. The next phase of growth will favour companies that can turn project experience into reusable content, device-agnostic platforms and recurring software or maintenance revenue. OEMs that design their own devices are expanding into recurring revenue streams like software licensing, device management and maintenance contracts. QWR operates this model alongside its own devices.

4.3. Business-Model Archetypes

The companies covered in the census generally operate through five business-model archetypes. Most Indian ISVs use a hybrid model rather than relying on a single revenue stream. A deployment may include an initial project fee, hardware margin, software licence, customised content and an annual maintenance contract. This structure helps providers address customer-specific requirements, but excessive dependence on customised projects can limit margins and growth.

Chart 13: India’s Business-Model Archetypes

Business-model archetype 	Revenue Structure 	Representative Companies 
Custom project and systems integration	One-time development, design and implementation fees, followed by maintenance or upgrade contracts	  
Platform or software licensing	Annual, subscription or enterprise licences for authoring, deployment, analytics or frontline tools	 
Content and institutional-lab model	Hardware installation combined with content access, instructor tools, training and annual support	 
Simulation-system model	Integrated hardware, software, physical controls and assessment tools sold or leased as a training system	
Hardware, ODM and bundled-deployment model	Device sales, product customisation, engineering fees, white-label manufacturing and software integration	  

The more scalable companies will be those that convert project experience into reusable intellectual property. Standard content modules, configurable workflows, no-code authoring tools, device-management platforms and repeatable deployment processes can reduce implementation time while preserving the localisation required by Indian customers.

Section 5: Enabling Factors for XR Development in India

India has several conditions that can support the development of an XR industry, including a large enterprise market, expanding digital infrastructure, a broad technology workforce and growing policy support for immersive media. However, these factors are developing at different speeds. India is relatively well positioned in software, content and implementation services, while device affordability, specialised hardware capabilities, commercial funding and large-scale procurement remain important constraints.

5.1. Economic Growth and Population

India's XR opportunity is supported by both economic growth and demographic scale. Real GDP grew by an estimated 7.8% in 2025-26, while continued investment in manufacturing, services and infrastructure is expanding the potential use of XR in training, design, maintenance, healthcare and education. Unlike consumer demand, these enterprise applications can be justified through measurable gains in safety, productivity and learning outcomes.

India's young population strengthens this opportunity. Around 65% of the population is below 35, and the working-age population is projected to reach approximately 1.04 billion by 2030, when the dependency ratio could fall to a historic low. This creates a two-sided advantage: a large talent pool to develop and localise XR solutions and a broad user base across workplaces, educational institutions and consumer markets.

Nevertheless, India's near-term XR market will remain enterprise-led because headset prices are still high relative to household incomes and are affected by import costs, currency movements and rising memory prices. The country's base of more than 735 million smartphone users demonstrates how quickly young consumers can adopt new technology when devices become affordable, distribution improves and locally relevant applications emerge. XR could follow a similar path, although adoption will be slower because headsets are currently less essential and require a stronger use-case justification.

5.2. Infrastructure and Talent Readiness

India's connectivity base has improved significantly. Broadband subscriptions exceeded one billion at the end of December 2025, while 5G services were available in 99.9% of districts and covered approximately 85% of the population by October 2025. This infrastructure can support remote assistance, cloud-based content distribution, collaborative applications and device monitoring.

Connectivity alone, however, is not sufficient. Enterprise XR deployments also require reliable workplace Wi-Fi, secure cloud access, suitable computing infrastructure and integration with learning, engineering or operational systems. Many applications must continue working with limited connectivity, particularly in factories, hospitals, defence facilities and remote training locations. Offline capability and local processing will therefore remain important design requirements.

India has a large base of software developers, 3D artists, game-engine specialists and digital-content professionals. This provides a foundation for application development and localisation. The more significant talent gaps are in specialised areas such as optical engineering, device firmware, ergonomics, spatial-interface design, enterprise product management and large-scale XR deployment. Industry and academic programmes must therefore move beyond basic application development towards multi-disciplinary XR product skills.

The Indian Institute of Creative Technologies is an important step in this direction. Its first operational phase began in July 2025 with 18 specialised programmes, more than 130 students and an incubator supporting eight creative-technology ventures. The institution was established with one-time budgetary support of around INR 3.9 billion.

India's domestic solution providers also strengthen market readiness. They offer capabilities across device development, educational content, industrial simulation, healthcare training, frontline assistance and systems integration. Changes in the enterprise strategies of global device vendors make these local capabilities more important, as Indian providers may increasingly need to manage hardware procurement, application deployment, device administration and post-deployment support.

5.3. AVGC-XR Industry and State-level Funding

Government recognition of animation, visual effects, gaming, comics and XR as the AVGC-XR sector has increased the visibility of immersive technologies. The Union Budget for 2026-27 proposed AVGC Content Creator Labs in 15,000 secondary schools and 500 colleges, supported by an allocation of INR 2.5 billion. If implemented effectively, these laboratories could expand early exposure to real-time 3D production, interactive media and immersive-content development.

State governments are also developing dedicated policies. Karnataka's AVGC-XR Policy 2024-29 focuses on skills, incubation and industry competitiveness, while Maharashtra approved an AVGC-XR Policy in 2025 with an INR 32.68-billion financial roadmap covering production infrastructure, employment and training.

These initiatives are positive, but AVGC-XR funding should not be treated entirely as direct XR-market spending. A substantial share supports animation, gaming, visual effects and general content creation. The impact on XR will depend on how much funding reaches immersive laboratories, spatial-computing courses, enterprise pilots, testing facilities and XR-focused start-ups. Policy outcomes should therefore be assessed through completed programmes, trained professionals and commercially deployed solutions rather than announced funding alone.

5.4. Legal and Policy Incentives

India does not have any national policy dedicated exclusively to XR. The market is influenced by a combination of electronics manufacturing, digital content, start-up, data protection, telecommunications and state-level AVGC-XR policies. This provides broad support but can make the policy environment difficult for smaller companies to navigate.

A significant regulatory development is the inclusion of augmented-, virtual- and mixed-reality products under the BIS' Compulsory Registration Scheme. The applicable safety standard is IS/IEC 62368 Part 1:2023. Certification can increase compliance costs and market-entry time, but it should also improve product traceability, safety and buyer confidence, particularly in institutional procurement.

Data protection is another important consideration because XR systems may collect video, audio, spatial maps, user-performance records and other identifiable information. The Digital Personal Data Protection Rules, 2025, are being introduced through a phased implementation schedule. XR suppliers serving enterprises, schools and healthcare organisations will require clear consent processes, secure data storage, defined retention periods and controls over third-party access.

Electronics manufacturing programmes may also provide indirect support. By March 2026, 75 applications under the ECMS had been approved with an expected investment of INR 616.71 billion. The approved categories include display modules, antennas, lithium-ion cells, flexible printed circuit boards and other components that could eventually support wearable-device manufacturing. However, the scheme is not XR-specific, and India will remain dependent on imported processors, memory, sensors and precision optics in the near term.

5.5. India Investment Landscape and Capital Flows in XR Domain

Investment in Indian XR companies remains selective. There is no standard public database that separately tracks XR funding, and many transactions are reported under gaming, enterprise software, education technology, healthcare technology or the wider AVGC sector. Publicly reported XR investment totals should therefore be treated cautiously.

Most companies currently rely on a combination of founder capital, angel or venture funding, strategic partnerships, enterprise contracts and public incubation programmes. Government-supported platforms are increasing start-up visibility: 51 AVGC-XR and media-technology companies participated in the India AI Impact Expo in 2026, while incubation initiatives associated with the wider creative-technology ecosystem are providing access to infrastructure and mentoring.

Investors are increasingly likely to favour companies with repeatable products, defensible intellectual property, recurring software or content revenue and established enterprise customers. Businesses dependent mainly on one-time

demonstration projects may find it more difficult to scale. Hardware-led companies face additional requirements for inventory financing, certification, warranties and after-sales support.

The strongest financing case will therefore come from companies that can convert customised projects into reusable platforms, content libraries or managed services. Exportable software and domain-specific solutions may attract capital more easily than businesses dependent entirely on domestic headset sales.

Section 6: Strategic Recommendations to Accelerate XR Growth in India

India's XR hardware shipments are forecast to grow at a CAGR of 27.4% between 2025 and 2030, reaching INR 9.02 billion in wholesale value. However, growth will not be uniform. Higher component prices, import dependence, changes in OEM strategy and long enterprise procurement cycles could create short-term volatility. India's opportunity therefore depends on building complete solutions that combine appropriate hardware with software, content, integration, support and measurable outcomes.

Prioritise Scalable, High-Value Applications

Industry development should focus on applications with clear economic or operational value. Manufacturing training, equipment maintenance, healthcare simulation, vocational education, defence training and design visualisation are more likely to progress from pilots to large deployments. Public and private buyers should define measurable targets such as lower training costs, fewer errors, improved safety or reduced equipment downtime before approving projects.

Move from Pilots to Multi-Year Programmes

Many Indian XR deployments remain small pilots that do not progress to wider implementation. Enterprises and government buyers should use phased procurement models in which successful pilots automatically move into larger rollouts after meeting agreed performance indicators. Multi-year contracts covering software updates, content, device replacement and maintenance would provide greater revenue visibility for suppliers and reduce the risk of abandoned deployments.

Strengthen Formal Hardware Distribution

Enterprises require GST-compliant invoices, certification, predictable delivery, warranties and replacement support. OEMs should expand authorised distribution, maintain local inventory and provide clear enterprise-service policies. Parallel imports may continue to serve consumer demand, but they are less suitable for institutional deployments where warranty, compliance and device continuity are important.

Procurement budgets should also account for exchange-rate movements and component-price changes. Fixed budgets can quickly become outdated when memory, storage or freight costs increase, delaying projects or forcing buyers to reduce the number of devices to be purchased.

Build Device-Agnostic Enterprise Solutions

Indian ISVs should avoid excessive dependence on one headset or operating system. Applications should support open development standards and be designed for migration across compatible devices. Meta's withdrawal from dedicated commercial Quest SKUs shows how changes in OEM strategy can alter enterprise procurement. Organisations may continue buying consumer Quest devices through retail channels, but device management, application distribution and support increasingly need to be handled by third-party providers and systems integrators.

Support Productization of Indian XR Companies

Indian providers should convert customised projects into reusable products, content libraries and deployment platforms. No-code authoring, configurable workflows, learner analytics, remote device management and standardised industry modules can reduce development time and improve margins. Government grants and incubators should prioritise companies with proprietary technology, recurring revenue and demonstrated commercial deployments rather than supporting isolated demonstrations.

Develop Practical XR Talent

India has a broad software and digital-content workforce, but specialised skills remain limited in optics, firmware, spatial-interface design, ergonomics, enterprise security and large-scale device deployment. Academic programmes should combine technical training with real industry projects in manufacturing, healthcare, education and defence. Existing AVGC-XR initiatives should allocate dedicated capacity to immersive-content production, spatial computing and enterprise implementation rather than treating XR only as an extension of animation or gaming.

Build Hardware Capability in Stages

India should distinguish between branded or assembled devices and deeper domestic hardware capability. Outsourced white-labelled products can improve market access, but they do not remove exposure to imported processors, displays, memory, sensors and optics. Near-term opportunities include product design, firmware, testing, certification, enclosures, accessories, charging systems and specialised peripherals. Advanced optics, display systems and other high-value components should be treated as longer-term priorities requiring sustained investment and technical partnerships.

Improve Access to Capital

XR companies often face long sales cycles and must finance hardware inventory before receiving payment from institutional customers. Investors and public programmes should provide milestone-based funding, procurement-backed working capital and paid pilot support. Companies with repeatable enterprise products, recurring licences and export potential should receive greater priority than businesses dependent entirely on one-time projects.

India can also become an export base for XR software, simulation content and integration services. These activities require less capital than component manufacturing and can use India's strengths in software development, 3D content and sector-specific customisation.

Establish Clear Data, Privacy and Security Standards

XR applications can collect video, audio, spatial maps and user-performance information. Suppliers should provide clear consent, data-retention and access-control policies, particularly for education, healthcare, defence and government deployments. Enterprise buyers should include cybersecurity, offline operation, data location and software-update requirements in procurement contracts.

Improve Market Measurement

The industry requires consistent definitions to avoid overstating adoption. Shipments should be measured as transfers from the manufacturer to the distributor, with official and parallel channels reported separately. Display-enabled AR devices should also be distinguished from screenless camera- and audio-based AI glasses. Clear definitions will improve procurement planning, investment decisions and comparison of market estimates.

Strategic Outlook

India is unlikely to follow a purely consumer-led XR development path during the forecast period. Its strongest opportunity lies in applying XR to practical requirements across industry, education, healthcare, defence and public services. By scaling proven applications, strengthening formal distribution, supporting device-agnostic software and gradually developing deeper technical capabilities, India can become both a major enterprise XR market and an export base for immersive solutions and services.

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