

# **Human Augmentation Market by Wearable (Wristwear, Bodywear, Footwear, Eyewear), AR (Head-mounted display), VR (Head-up display), Biometric (Fingerprint, Face, Iris), Exoskeleton (Powered, Passive), IVA (Chatbot), Functionality - Global Forecast to 2028**

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## **Abstracts**

The global human augmentation market is expected to be valued at USD 253.6 billion in 2023 and is projected to reach USD 545.1 billion by 2028; it is expected to grow at a CAGR of 16.5% from 2023 to 2028. Wearable devices, such as fitness trackers and smartwatches, are widely adopted for monitoring various health and wellness metrics. The widespread adoption of wearable devices in the consumer market indicates a growing interest in incorporating technology into daily life. This increased acceptance has spilled over into the broader human augmentation market, raising awareness and driving further innovation.

“Aerospace and Defense end-user industries to account for the second highest CAGR for human augmentation market.”

The military and defense sector is investing heavily in human augmentation technologies to enhance the physical and cognitive capabilities of soldiers. Exoskeletons, wearable devices, and cognitive enhancements can improve soldiers' strength, endurance, and decision-making, increasing their overall performance and effectiveness. AR and VR technologies are used for training, simulation, and mission planning. These technologies provide immersive experiences for soldiers and defense personnel, enhancing their skills and preparedness. Advances in technology have led to the development of lightweight, portable, and durable human augmentation devices that are suitable for use in the challenging and rugged environments encountered in the aerospace and defense sectors.

“North America to have the highest share of the human augmentation market”

North America, particularly the United States, is a hub for technological innovation. Ongoing advancements in fields like robotics, artificial intelligence, biotechnology, and materials science are driving the development of advanced human augmentation technologies. The demand for medical augmentations, such as prosthetics, wearable medical devices, and surgical robotics, is increasing due to a growing aging population and the need for advanced healthcare solutions. The consumer market for human augmentation includes products like fitness wearables, smart glasses, and brain-computer interfaces. These consumer-oriented technologies are contributing to the market's growth.

The study contains insights from various industry experts, ranging from component suppliers to Tier 1 companies and OEMs. The break-up of the primaries is as follows:

By Company Type: Tier 1 – 10%, Tier 2 – 55%, and Tier 3 – 35%

By Designation: C-level Executives – 45%, Directors – 25%, and Others – 30%

By Region: North America – 55%, Europe – 20%, Asia Pacific – 15%, RoW – 10%

The key players operating in the human augmentation market are Samsung (South Korea), Alphabet Incorporation (US), Apple Inc. (US), Meta (US), Microsoft (US).

The research report categorizes the Human Augmentation market, By Product Type (Wearable Devices, AR Devices, VR Devices, Exoskeletons, Biometric systems, Intelligent Virtual Assistants), Functionality (Body-worn, Non Body-worn), Technology (Artificial Intelligence Integration, Quantum Computing Augmentation, Biohacking and Bio-Augmentation), End-user (Consumer, Commercial, Medical, Aerospace & Defense, Industrial, Other end-user), and Region (North America, Europe, Asia Pacific, and RoW). The scope of the report covers detailed information regarding the major factors, such as drivers, restraints, challenges, and opportunities, influencing the growth of the human augmentation market. A detailed analysis of the key industry players has been done to provide insights into their business overviews, products, key strategies; Contracts, partnerships, agreements. new product & service launches, mergers and acquisitions, and recent developments associated with the human augmentation

market. Competitive analysis of upcoming startups in the human augmentation market ecosystem is covered in this report.

Research Coverage:

Key Benefits of Buying the Report

Analysis of key drivers (Growth in virtual reality (VR) and augmented reality (AR) technologies, Advancements in medical technology, Increasing adoption of wearable devices, Growing adoption of advanced technologies in sports), restraints (High cost of technology, Integration issues with existing systems), opportunities (Growing adoption of technologies in military and defense, Adoption of remote work and telemedicine, Wide range of applications in gaming and entertainment industries), and challenges (Long-term health effects, Safety and liability issues) influencing the growth of the human augmentation market.

Product Development/Innovation: Detailed insights on upcoming technologies, research & development activities, and new product launches in the human augmentation market

Market Development: Comprehensive information about lucrative markets – the report analyses the human augmentation market across varied regions.

Market Diversification: Exhaustive information about new products, untapped geographies, recent developments, and investments in the human augmentation market

Competitive Assessment: In-depth assessment of market shares, growth strategies and service offerings of leading players like Samsung (South Korea), Alphabet Incorporation (US), Apple Inc. (US), Meta (US), Microsoft (US) among others in the human augmentation market.

## Contents

### 1 INTRODUCTION

#### 1.1 STUDY OBJECTIVES

#### 1.2 MARKET DEFINITION

##### 1.2.1 INCLUSIONS AND EXCLUSIONS

#### 1.3 STUDY SCOPE

##### 1.3.1 MARKETS COVERED

#### FIGURE 1 HUMAN AUGMENTATION MARKET SEGMENTATION

##### 1.3.2 REGIONAL SCOPE

##### 1.3.3 YEARS CONSIDERED

#### 1.4 CURRENCY CONSIDERED

#### 1.5 STAKEHOLDERS

#### 1.6 SUMMARY OF CHANGES

#### 1.7 RECESSION IMPACT

### 2 RESEARCH METHODOLOGY

#### 2.1 RESEARCH DATA

#### FIGURE 2 HUMAN AUGMENTATION MARKET: RESEARCH DESIGN

##### 2.1.1 SECONDARY DATA

###### 2.1.1.1 Major secondary sources

###### 2.1.1.2 Key data from secondary sources

##### 2.1.2 PRIMARY DATA

###### 2.1.2.1 Primary interviews with experts

###### 2.1.2.2 Key data from primary sources

###### 2.1.2.3 Key industry insights

###### 2.1.2.4 Breakdown of primaries

##### 2.1.3 SECONDARY AND PRIMARY RESEARCH

#### 2.2 MARKET SIZE ESTIMATION

#### FIGURE 3 RESEARCH FLOW OF MARKET SIZE ESTIMATION

##### 2.2.1 BOTTOM-UP APPROACH

2.2.1.1 Approach to estimate market size using bottom-up analysis  
(supply side)

FIGURE 4 MARKET SIZE ESTIMATION (SUPPLY SIDE): REVENUE FROM SALES  
OF HUMAN AUGMENTATION PRODUCTS AND SOLUTIONS

FIGURE 5 MARKET SIZE ESTIMATION: BOTTOM-UP APPROACH

##### 2.2.2 TOP-DOWN APPROACH

2.2.2.1 Approach to estimate market size using top-down analysis  
(supply side)

FIGURE 6 MARKET SIZE ESTIMATION: TOP-DOWN APPROACH

2.3 DATA TRIANGULATION

FIGURE 7 DATA TRIANGULATION

2.4 RESEARCH ASSUMPTIONS

2.5 RISK ASSESSMENT

TABLE 1 RISK FACTOR ANALYSIS

2.6 PARAMETERS CONSIDERED TO ANALYZE RECESSION IMPACT ON HUMAN  
AUGMENTATION MARKET

2.7 LIMITATIONS

### **3 EXECUTIVE SUMMARY**

3.1 GROWTH RATE ASSUMPTIONS/FORECAST

FIGURE 8 WEARABLE DEVICES SEGMENT TO ACCOUNT FOR LARGEST SHARE  
OF HUMAN AUGMENTATION MARKET DURING FORECAST PERIOD

FIGURE 9 BODY-WORN SEGMENT TO REGISTER HIGHER CAGR IN HUMAN  
AUGMENTATION MARKET DURING FORECAST PERIOD

FIGURE 10 CONSUMER SEGMENT TO COMMAND LARGEST SHARE OF HUMAN  
AUGMENTATION DURING FORECAST PERIOD

FIGURE 11 NORTH AMERICA ACCOUNTED FOR LARGEST SHARE OF HUMAN  
AUGMENTATION MARKET IN 2022

### **4 PREMIUM INSIGHTS**

4.1 ATTRACTIVE OPPORTUNITIES FOR PLAYERS IN HUMAN AUGMENTATION  
MARKET

FIGURE 12 TECHNOLOGICAL ADVANCEMENTS IN VARIOUS INDUSTRIES TO  
DRIVE MARKET

4.2 NORTH AMERICA: HUMAN AUGMENTATION MARKET, BY COUNTRY AND  
PRODUCT TYPE

FIGURE 13 US AND WEARABLE DEVICES TO HOLD LARGEST SHARE OF NORTH  
AMERICA HUMAN AUGMENTATION MARKET IN 2023

4.3 NORTH AMERICA: HUMAN AUGMENTATION MARKET, BY COUNTRY

FIGURE 14 US TO HOLD LARGEST SHARE OF HUMAN AUGMENTATION MARKET  
IN NORTH AMERICA DURING FORECAST PERIOD

4.4 HUMAN AUGMENTATION MARKET, BY COUNTRY

FIGURE 15 HUMAN AUGMENTATION MARKET IN CHINA TO RECORD HIGHEST

CAGR FROM 2023 TO 2028

## 5 MARKET OVERVIEW

### 5.1 INTRODUCTION

### 5.2 MARKET DYNAMICS

FIGURE 16 HUMAN AUGMENTATION MARKET: DRIVERS, RESTRAINTS, OPPORTUNITIES, AND CHALLENGES

#### 5.2.1 DRIVERS

5.2.1.1 Growth in virtual reality (VR) and augmented reality (AR) technologies

5.2.1.2 Advancements in medical technology

5.2.1.3 Increasing adoption of wearable devices

5.2.1.4 Growing adoption of advanced technologies in sports

FIGURE 17 IMPACT ANALYSIS OF DRIVERS ON HUMAN AUGMENTATION MARKET

#### 5.2.2 RESTRAINTS

5.2.2.1 High costs associated with human augmentation technologies

5.2.2.2 Integration issues with existing systems

FIGURE 18 IMPACT ANALYSIS OF RESTRAINTS ON HUMAN AUGMENTATION MARKET

#### 5.2.3 OPPORTUNITIES

5.2.3.1 Growing adoption of human augmentation technologies in military and defense sector

5.2.3.2 Shift toward remote work and telemedicine

5.2.3.3 Emerging applications of human augmentation technologies in gaming and entertainment industries

FIGURE 19 IMPACT ANALYSIS OF OPPORTUNITIES IN HUMAN AUGMENTATION MARKET

#### 5.2.4 CHALLENGES

5.2.4.1 Long-term health effects and biocompatibility issues related to prolonged use of human augmentation technologies

5.2.4.2 Safety and liability issues associated with augmentation devices

FIGURE 20 IMPACT ANALYSIS OF CHALLENGES ON HUMAN AUGMENTATION MARKET

### 5.3 VALUE CHAIN ANALYSIS

FIGURE 21 HUMAN AUGMENTATION MARKET: VALUE CHAIN ANALYSIS

### 5.4 ECOSYSTEM MAPPING

FIGURE 22 KEY PLAYERS IN HUMAN AUGMENTATION MARKET

TABLE 2 HUMAN AUGMENTATION MARKET: ROLE OF COMPANIES IN

## ECOSYSTEM

### 5.5 PORTER'S FIVE FORCES ANALYSIS

#### TABLE 3 IMPACT OF PORTER'S FIVE FORCES ON HUMAN AUGMENTATION MARKET

#### FIGURE 23 HUMAN AUGMENTATION MARKET: PORTER'S FIVE FORCES ANALYSIS

##### 5.5.1 THREAT OF NEW ENTRANTS

##### 5.5.2 THREAT OF SUBSTITUTES

##### 5.5.3 BARGAINING POWER OF SUPPLIERS

##### 5.5.4 BARGAINING POWER OF BUYERS

##### 5.5.5 INTENSITY OF COMPETITIVE RIVALRY

### 5.6 KEY STAKEHOLDERS AND BUYING CRITERIA

#### 5.6.1 KEY STAKEHOLDERS IN BUYING PROCESS

#### FIGURE 24 INFLUENCE OF STAKEHOLDERS ON BUYING PROCESS FOR TOP 3 END USERS

#### TABLE 4 INFLUENCE OF STAKEHOLDERS ON BUYING PROCESS FOR TOP 3 END USERS (%)

##### 5.6.2 BUYING CRITERIA

#### FIGURE 25 KEY BUYING CRITERIA FOR TOP 3 END USERS

#### TABLE 5 KEY BUYING CRITERIA FOR TOP 3 END USERS

### 5.7 TRENDS/DISRUPTIONS IMPACTING CUSTOMER BUSINESS

#### FIGURE 26 TRENDS/DISRUPTIONS IMPACTING CUSTOMER BUSINESS

### 5.8 PRICING ANALYSIS

#### FIGURE 27 AVERAGE SELLING PRICE TRENDS OF PRODUCTS OFFERED BY KEY PLAYERS, BY END USER

#### TABLE 6 AVERAGE SELLING PRICE TRENDS, BY REGION (USD)

#### TABLE 7 PRICING ANALYSIS OF PRODUCTS OFFERED BY KEY PLAYERS, BY APPLICATION (USD)

### 5.9 CASE STUDY ANALYSIS

#### TABLE 8 PFIZER COLLABORATED WITH MAGIC LEAP TO DEVELOP MIXED-REALITY SOLUTION FOR DRUG DISCOVERY AND VISUALIZATION

#### TABLE 9 TOYOTA MOTOR MANUFACTURING IMPLEMENTED EXOSKELETONS FROM EKSO BIONICS IN ITS MANUFACTURING FACILITIES

#### TABLE 10 GENERAL MOTORS PARTNERED WITH SARCOS ROBOTICS TO DEPLOY WEARABLE EXOSKELETONS FOR FACTORY WORKERS

#### TABLE 11 SIEMENS POWER GENERATION SERVICES COLLABORATED WITH REALWEAR TO ENHANCE REMOTE TECHNICAL SUPPORT USING AR TECHNOLOGY

#### TABLE 12 MERCEDES-BENZ STREAMLINED REPAIR PROCEDURES BY



## EQUIPPING TECHNICIANS WITH GOOGLE'S GLASS ENTERPRISE EDITION AR GLASSES

### 5.10 TECHNOLOGY ANALYSIS

#### 5.10.1 KEY TECHNOLOGIES

##### 5.10.1.1 Exoskeletons

##### 5.10.1.2 Augmented reality (AR) and virtual reality (VR)

##### 5.10.1.3 Brain-computer interfaces (BCIs)

##### 5.10.1.4 Biotechnology and biohacking

##### 5.10.1.5 Prosthetics and bionics

#### 5.10.2 COMPLEMENTARY TECHNOLOGIES

##### 5.10.2.1 Artificial intelligence (AI)

##### 5.10.2.2 Internet of Things (IoT)

##### 5.10.2.3 Biometrics and biosensors

##### 5.10.2.4 Cybersecurity

#### 5.10.3 ADJACENT TECHNOLOGIES

##### 5.10.3.1 Biomechanics and robotics

##### 5.10.3.2 Biotechnology and regenerative medicine

##### 5.10.3.3 Sensors and wearable technology

##### 5.10.3.4 Materials science

### 5.11 PATENT ANALYSIS

FIGURE 28 NUMBER OF PATENTS GRANTED IN HUMAN AUGMENTATION MARKET, 2012–2022

TABLE 13 LIST OF FEW PATENTS IN HUMAN AUGMENTATION MARKET, 2020–2022

### 5.12 TRADE ANALYSIS

TABLE 14 IMPORT DATA, BY COUNTRY, 2018–2022 (USD MILLION)

FIGURE 29 IMPORT DATA, BY COUNTRY, 2018–2022 (USD MILLION)

TABLE 15 EXPORT DATA, BY COUNTRY, 2018–2022 (USD MILLION)

FIGURE 30 EXPORT DATA, BY COUNTRY, 2018–2022 (USD MILLION)

### 5.13 TARIFF ANALYSIS

TABLE 16 MFN TARIFFS FOR HS CODE 9021-COMPLIANT PRODUCTS EXPORTED BY US

TABLE 17 MFN TARIFFS FOR HS CODE 9021-COMPLIANT PRODUCTS EXPORTED BY CHINA

TABLE 18 MFN TARIFF FOR HS CODE 9021-COMPLIANT PRODUCTS EXPORTED BY JAPAN

### 5.14 STANDARDS AND REGULATORY LANDSCAPE

5.14.1 REGULATORY BODIES, GOVERNMENT AGENCIES, AND OTHER ORGANIZATIONS



TABLE 19 NORTH AMERICA: LIST OF REGULATORY BODIES, GOVERNMENT AGENCIES, AND OTHER ORGANIZATIONS

TABLE 20 EUROPE: LIST OF REGULATORY BODIES, GOVERNMENT AGENCIES, AND OTHER ORGANIZATIONS

TABLE 21 ASIA PACIFIC: LIST OF REGULATORY BODIES, GOVERNMENT AGENCIES, AND OTHER ORGANIZATIONS

TABLE 22 ROW: LIST OF REGULATORY BODIES, GOVERNMENT AGENCIES, AND OTHER ORGANIZATIONS

5.14.2 STANDARDS & REGULATIONS RELATED TO HUMAN AUGMENTATION MARKET

5.14.2.1 Restriction of hazardous substances (RoHS) directive

5.14.3 AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)

5.15 KEY CONFERENCES AND EVENTS, 2023–2024

TABLE 23 HUMAN AUGMENTATION MARKET: DETAILED LIST OF CONFERENCES AND EVENTS

## **6 HUMAN AUGMENTATION MARKET, BY PRODUCT TYPE**

### **6.1 INTRODUCTION**

FIGURE 31 EXOSKELETONS TO RECORD HIGHEST CAGR IN HUMAN AUGMENTATION MARKET DURING FORECAST PERIOD

TABLE 24 HUMAN AUGMENTATION MARKET, BY PRODUCT TYPE, 2019–2022 (USD BILLION)

TABLE 25 HUMAN AUGMENTATION MARKET, BY PRODUCT TYPE, 2023–2028 (USD BILLION)

### **6.2 WEARABLE DEVICES**

TABLE 26 WEARABLE DEVICES: HUMAN AUGMENTATION MARKET, BY TYPE, 2019–2022 (USD BILLION)

TABLE 27 WEARABLE DEVICES: HUMAN AUGMENTATION MARKET, BY TYPE, 2023–2028 (USD BILLION)

TABLE 28 WEARABLE DEVICES: HUMAN AUGMENTATION MARKET, BY TYPE, 2019–2022 (MILLION UNITS)

TABLE 29 WEARABLE DEVICES: HUMAN AUGMENTATION MARKET, BY TYPE, 2023–2028 (MILLION UNITS)

TABLE 30 WEARABLE DEVICES: HUMAN AUGMENTATION MARKET, BY APPLICATION, 2019–2022 (USD BILLION)

TABLE 31 WEARABLE DEVICES: HUMAN AUGMENTATION MARKET, BY APPLICATION, 2023–2028 (USD BILLION)

TABLE 32 WEARABLE DEVICES: HUMAN AUGMENTATION MARKET, BY REGION,

2019–2022 (USD BILLION)

TABLE 33 WEARABLE DEVICES: HUMAN AUGMENTATION MARKET, BY REGION,  
2023–2028 (USD BILLION)

#### 6.2.1 BODYWEAR

TABLE 34 BODYWEAR: HUMAN AUGMENTATION MARKET FOR WEARABLE  
DEVICES, BY TYPE, 2019–2022 (USD BILLION)

TABLE 35 BODYWEAR: HUMAN AUGMENTATION MARKET FOR WEARABLE  
DEVICES, BY TYPE, 2023–2028 (USD BILLION)

##### 6.2.1.1 Innerwear

6.2.1.1.1 Growing demand for real-time health data among fitness enthusiasts to  
fuel segmental growth

##### 6.2.1.2 Outerwear

6.2.1.2.1 Growing interest in outdoor activities to fuel demand for outerwear devices

#### 6.2.2 FOOTWEAR

TABLE 36 FOOTWEAR: HUMAN AUGMENTATION MARKET FOR WEARABLE  
DEVICES, BY TYPE, 2019–2022 (USD BILLION)

TABLE 37 FOOTWEAR: HUMAN AUGMENTATION MARKET FOR WEARABLE  
DEVICES, BY TYPE, 2023–2028 (USD BILLION)

##### 6.2.2.1 Special-purpose footwear

6.2.2.1.1 Growing prevalence of orthopedic and musculoskeletal conditions to drive  
demand for special-purpose footwear

##### 6.2.2.2 Casual footwear

6.2.2.2.1 Increasing interest in fitness and health monitoring to drive segmental  
growth

#### 6.2.3 WRISTWEAR

TABLE 38 WRISTWEAR: HUMAN AUGMENTATION MARKET, BY TYPE, 2019–2022  
(USD BILLION)

TABLE 39 WRISTWEAR: HUMAN AUGMENTATION MARKET, BY TYPE, 2023–2028  
(USD BILLION)

##### 6.2.3.1 Smartwatch

6.2.3.1.1 Increasing focus of fitness enthusiasts on tracking health and fitness  
parameters to boost demand for smartwatches

##### 6.2.3.2 Wristband

6.2.3.2.1 Increasing use of wristbands to enhance functioning of daily life to propel  
market growth

#### 6.2.4 EYEWEAR

6.2.4.1 Increasing demand for AR experiences to boost adoption of eyewear

#### 6.2.5 NECKWEAR

6.2.5.1 Rising adoption of neckwear for posture correction to drive segmental growth

#### 6.2.6 OTHERS

TABLE 40 OTHERS: HUMAN AUGMENTATION MARKET, BY TYPE, 2019–2022  
(USD BILLION)

TABLE 41 OTHERS: HUMAN AUGMENTATION MARKET, BY TYPE, 2023–2028  
(USD BILLION)

6.2.6.1 Ring scanners

6.2.6.2 Body-worn cameras

6.2.6.3 Implants

#### 6.2.7 APPLICATIONS OF WEARABLE DEVICES

6.2.7.1 Consumer

6.2.7.2 Healthcare

6.2.7.3 Enterprise & industrial

6.2.7.4 Others

#### 6.3 AUGMENTED REALITY DEVICES

TABLE 42 AR DEVICES: HUMAN AUGMENTATION MARKET, BY OFFERING,  
2019–2022 (USD BILLION)

TABLE 43 AR DEVICES: HUMAN AUGMENTATION MARKET, BY OFFERING,  
2023–2028 (USD BILLION)

TABLE 44 AR DEVICES: HUMAN AUGMENTATION MARKET, BY REGION,  
2019–2022 (USD BILLION)

TABLE 45 AR DEVICES: HUMAN AUGMENTATION MARKET, BY REGION,  
2023–2028 (USD BILLION)

#### 6.3.1 HARDWARE

TABLE 46 HARDWARE: HUMAN AUGMENTATION MARKET FOR AR DEVICES, BY  
TYPE, 2019–2022 (USD BILLION)

TABLE 47 HARDWARE: HUMAN AUGMENTATION MARKET FOR AR DEVICES, BY  
TYPE, 2023–2028 (USD BILLION)

TABLE 48 HARDWARE: HUMAN AUGMENTATION MARKET FOR AR DEVICES, BY  
TYPE, 2019–2022 (MILLION UNITS)

TABLE 49 HARDWARE: HUMAN AUGMENTATION MARKET FOR AR DEVICES, BY  
TYPE, 2023–2028 (MILLION UNITS)

TABLE 50 HARDWARE: HUMAN AUGMENTATION MARKET FOR AR DEVICES, BY  
APPLICATION, 2019–2022 (USD BILLION)

TABLE 51 HARDWARE: HUMAN AUGMENTATION MARKET FOR AR DEVICES, BY  
APPLICATION, 2023–2028 (USD BILLION)

TABLE 52 HARDWARE: HUMAN AUGMENTATION MARKET FOR AR DEVICES, BY  
REGION, 2019–2022 (USD BILLION)

TABLE 53 HARDWARE: HUMAN AUGMENTATION MARKET FOR AR DEVICES, BY  
REGION, 2023–2028 (USD BILLION)

#### 6.3.1.1 Head-mounted displays

6.3.1.1.1 Rising implementation of HMDs in commercial, medical, and enterprise applications to support market growth

#### 6.3.1.2 Head-up displays

6.3.1.2.1 Increasing utilization of HUDs in automotive applications to fuel market growth

### 6.3.2 SOFTWARE

6.3.2.1 Growing adoption of AR software for gaming and entertainment applications to drive market

TABLE 54 SOFTWARE: HUMAN AUGMENTATION MARKET FOR AR DEVICES, BY APPLICATION, 2019–2022 (USD BILLION)

TABLE 55 SOFTWARE: HUMAN AUGMENTATION MARKET FOR AR DEVICES, BY APPLICATION, 2023–2028 (USD BILLION)

TABLE 56 SOFTWARE: HUMAN AUGMENTATION MARKET FOR AR DEVICES, BY REGION, 2019–2022 (USD BILLION)

TABLE 57 SOFTWARE: HUMAN AUGMENTATION MARKET FOR AR DEVICES, BY REGION, 2023–2028 (USD BILLION)

### 6.3.3 APPLICATIONS OF AR DEVICES

#### 6.3.3.1 Consumer

#### 6.3.3.2 Commercial

#### 6.3.3.3 Enterprise

#### 6.3.3.4 Healthcare

#### 6.3.3.5 Aerospace & defense

#### 6.3.3.6 Energy

#### 6.3.3.7 Automotive

#### 6.3.3.8 Others

TABLE 58 AR DEVICES: HUMAN AUGMENTATION MARKET, BY APPLICATION, 2019–2022 (USD BILLION)

TABLE 59 AR DEVICES: HUMAN AUGMENTATION MARKET, BY APPLICATION, 2023–2028 (USD BILLION)

### 6.4 VIRTUAL REALITY DEVICES

TABLE 60 VR DEVICES: HUMAN AUGMENTATION MARKET, BY OFFERING, 2019–2022 (USD BILLION)

TABLE 61 VR DEVICES: HUMAN AUGMENTATION MARKET, BY OFFERING, 2023–2028 (USD BILLION)

TABLE 62 VR DEVICES: HUMAN AUGMENTATION MARKET, BY REGION, 2019–2022 (USD BILLION)

TABLE 63 VR DEVICES: HUMAN AUGMENTATION MARKET, BY REGION, 2023–2028 (USD BILLION)

#### 6.4.1 HARDWARE

TABLE 64 HARDWARE: HUMAN AUGMENTATION MARKET FOR VR DEVICES MARKET, BY DEVICE TYPE, 2019–2022 (USD BILLION)

TABLE 65 HARDWARE: HUMAN AUGMENTATION MARKET FOR VR DEVICES MARKET, BY DEVICE TYPE, 2023–2028 (USD BILLION)

TABLE 66 HARDWARE: HUMAN AUGMENTATION MARKET FOR VR DEVICES, BY DEVICE TYPE, 2019–2022 (MILLION UNITS)

TABLE 67 HARDWARE: HUMAN AUGMENTATION MARKET FOR VR DEVICES, BY DEVICE TYPE, 2023–2028 (MILLION UNITS)

TABLE 68 HARDWARE: HUMAN AUGMENTATION MARKET FOR VR DEVICES, BY APPLICATION, 2019–2022 (USD BILLION)

TABLE 69 HARDWARE: HUMAN AUGMENTATION MARKET FOR VR DEVICES, BY APPLICATION, 2023–2028 (USD BILLION)

TABLE 70 HARDWARE: HUMAN AUGMENTATION MARKET FOR VR DEVICES, BY REGION, 2019–2022 (USD BILLION)

TABLE 71 HARDWARE: HUMAN AUGMENTATION MARKET FOR VR DEVICES, BY REGION, 2023–2028 (USD BILLION)

##### 6.4.1.1 Head-mounted displays

6.4.1.1.1 Rising demand for interactive experiences in gaming to boost adoption of HMDs

##### 6.4.1.2 Gesture-tracking devices

6.4.1.2.1 Rising adoption of gesture-tracking devices in gaming and healthcare applications to drive market

##### 6.4.1.3 Projector and display walls

6.4.1.3.1 Increasing adoption of projectors and display walls for commercial and automotive applications to drive market

#### 6.4.2 SOFTWARE

6.4.2.1 Rising demand for immersive experiences within virtual environments to fuel segmental growth

TABLE 72 SOFTWARE: HUMAN AUGMENTATION MARKET FOR VR DEVICES, BY APPLICATION 2019–2022 (USD BILLION)

TABLE 73 SOFTWARE: HUMAN AUGMENTATION MARKET FOR VR DEVICES, BY APPLICATION, 2023–2028 (USD BILLION)

TABLE 74 SOFTWARE: HUMAN AUGMENTATION MARKET FOR VR DEVICES, BY REGION, 2019–2022 (USD BILLION)

TABLE 75 SOFTWARE: HUMAN AUGMENTATION MARKET FOR VR DEVICES, BY REGION, 2023–2028 (USD BILLION)

#### 6.4.3 APPLICATIONS OF VR DEVICES

##### 6.4.3.1 Consumer

## 6.4.3.2 Commercial

## 6.4.3.3 Enterprise

## 6.4.3.4 Healthcare

## 6.4.3.5 Aerospace &amp; defense

## 6.4.3.6 Others

TABLE 76 VR DEVICES: HUMAN AUGMENTATION MARKET, BY APPLICATION, 2019–2022 (USD BILLION)

TABLE 77 VR DEVICES: HUMAN AUGMENTATION MARKET, BY APPLICATION, 2023–2028 (USD BILLION)

## 6.5 EXOSKELETONS

TABLE 78 EXOSKELETONS: HUMAN AUGMENTATION MARKET, BY TYPE, 2019–2022 (USD BILLION)

TABLE 79 EXOSKELETONS: HUMAN AUGMENTATION MARKET, BY TYPE, 2023–2028 (USD BILLION)

TABLE 80 EXOSKELETONS: HUMAN AUGMENTATION MARKET, BY TYPE, 2019–2022 (MILLION UNITS)

TABLE 81 EXOSKELETONS: HUMAN AUGMENTATION MARKET, BY TYPE, 2023–2028 (MILLION UNITS)

TABLE 82 EXOSKELETONS: HUMAN AUGMENTATION MARKET, BY REGION, 2019–2022 (USD BILLION)

TABLE 83 EXOSKELETONS: HUMAN AUGMENTATION MARKET, BY REGION, 2023–2028 (USD BILLION)

## 6.5.1 POWERED

6.5.1.1 Increasing demand for powered exoskeletons to enhance user endurance to drive market

TABLE 84 POWERED: HUMAN AUGMENTATION MARKET FOR EXOSKELETONS, BY END USER, 2019–2022 (USD MILLION)

TABLE 85 POWERED: HUMAN AUGMENTATION MARKET FOR EXOSKELETONS, BY END USER, 2023–2028 (USD MILLION)

TABLE 86 POWERED: HUMAN AUGMENTATION MARKET FOR EXOSKELETONS, BY REGION, 2019–2022 (USD MILLION)

TABLE 87 POWERED: HUMAN AUGMENTATION MARKET FOR EXOSKELETONS, BY REGION, 2023–2028 (USD MILLION)

## 6.5.2 PASSIVE

6.5.2.1 Increasing adoption of passive exoskeletons for ergonomic support to drive segmental growth

TABLE 88 PASSIVE: HUMAN AUGMENTATION MARKET FOR EXOSKELETONS, BY END USER, 2019–2022 (USD BILLION)

TABLE 89 PASSIVE: HUMAN AUGMENTATION MARKET FOR EXOSKELETONS, BY



END USER, 2023–2028 (USD BILLION)

TABLE 90 PASSIVE: HUMAN AUGMENTATION MARKET FOR EXOSKELETONS, BY REGION, 2019–2022 (USD BILLION)

TABLE 91 PASSIVE: HUMAN AUGMENTATION MARKET FOR EXOSKELETONS, BY REGION, 2023–2028 (USD BILLION)

#### 6.5.3 APPLICATIONS OF EXOSKELETONS

6.5.3.1 Healthcare

6.5.3.2 Defense

6.5.3.3 Industrial

6.5.3.4 Others

#### 6.6 BIOMETRIC SYSTEMS

TABLE 92 BIOMETRIC SYSTEMS: HUMAN AUGMENTATION MARKET, BY AUTHENTICATION TYPE, 2019–2022 (USD BILLION)

TABLE 93 BIOMETRIC SYSTEMS: HUMAN AUGMENTATION MARKET, BY AUTHENTICATION TYPE, 2023–2028 (USD BILLION)

TABLE 94 BIOMETRIC SYSTEMS: HUMAN AUGMENTATION MARKET, BY REGION, 2019–2022 (USD BILLION)

TABLE 95 BIOMETRIC SYSTEMS: HUMAN AUGMENTATION MARKET, BY REGION, 2023–2028 (USD BILLION)

##### 6.6.1 SINGLE-FACTOR AUTHENTICATION

TABLE 96 BIOMETRIC SYSTEMS: HUMAN AUGMENTATION MARKET, BY SINGLE-FACTOR AUTHENTICATION, 2019–2022 (USD BILLION)

TABLE 97 BIOMETRIC SYSTEMS: HUMAN AUGMENTATION MARKET, BY SINGLE-FACTOR AUTHENTICATION, 2023–2028 (USD BILLION)

TABLE 98 SINGLE-FACTOR AUTHENTICATION: HUMAN AUGMENTATION MARKET FOR BIOMETRIC SYSTEMS, BY END USER, 2019–2022 (USD BILLION)

TABLE 99 SINGLE-FACTOR AUTHENTICATION: HUMAN AUGMENTATION MARKET FOR BIOMETRIC SYSTEMS, BY END USER, 2023–2028 (USD BILLION)

##### 6.6.1.1 Fingerprint recognition

6.6.1.1.1 Increasing demand for fingerprint recognition in consumer electronics to drive market

TABLE 100 BIOMETRIC SYSTEMS: HUMAN AUGMENTATION MARKET, BY FINGERPRINT RECOGNITION TYPE, 2019–2022 (USD BILLION)

TABLE 101 BIOMETRIC SYSTEMS: HUMAN AUGMENTATION MARKET, BY FINGERPRINT RECOGNITION TYPE, 2023–2028 (USD BILLION)

##### 6.6.1.2 IRIS recognition

6.6.1.2.1 Adoption of IRIS recognition technology in high security applications to drive market

##### 6.6.1.3 Palm print recognition



6.6.1.3.1 Adoption of palm print recognition technology in retail and banking to support market growth

6.6.1.4 Face recognition

6.6.1.4.1 Growing applications of face recognition technology in security and surveillance applications to contribute to market growth

6.6.1.5 Vein recognition

6.6.1.5.1 Increasing adoption of vein recognition biometric systems in healthcare to propel market

6.6.1.6 Signature recognition

6.6.1.6.1 Utilization of signature recognition technology for fraud detection in banking sector to drive market

6.6.1.7 Voice recognition

6.6.1.7.1 Rising adoption of voice recognition technology in smart homes to create opportunities for market players

6.6.1.8 Others

## 6.6.2 MULTI-FACTOR AUTHENTICATION

TABLE 102 BIOMETRIC SYSTEMS: HUMAN AUGMENTATION MARKET, BY MULTI-FACTOR AUTHENTICATION, 2019–2022 (USD BILLION)

TABLE 103 BIOMETRIC SYSTEMS: HUMAN AUGMENTATION MARKET, BY MULTI-FACTOR AUTHENTICATION, 2023–2028 (USD BILLION)

TABLE 104 MULTI-FACTOR AUTHENTICATION: HUMAN AUGMENTATION MARKET FOR BIOMETRIC SYSTEMS, BY REGION, 2019–2022 (USD BILLION)

TABLE 105 MULTI-FACTOR AUTHENTICATION: HUMAN AUGMENTATION MARKET FOR BIOMETRIC SYSTEMS, BY REGION, 2023–2028 (USD BILLION)

TABLE 106 MULTI-FACTOR AUTHENTICATION: HUMAN AUGMENTATION MARKET FOR BIOMETRIC SYSTEMS, BY END USER, 2019–2022 (USD BILLION)

TABLE 107 MULTI-FACTOR AUTHENTICATION: HUMAN AUGMENTATION MARKET FOR BIOMETRIC SYSTEMS, 2023–2028 (USD BILLION)

6.6.2.1 Biometric smart card

6.6.2.1.1 Increasing demand for enhanced transaction security to boost adoption of biometric smart cards

6.6.2.2 Biometric PIN

6.6.2.2.1 Rising adoption of biometric PIN in physical access systems to drive segmental growth

6.6.2.3 Multimodal

6.6.2.3.1 Increasing adoption of multimodal authentication in commercial spaces to drive segmental growth

6.6.2.3.2 Two-factor authentication

6.6.2.3.3 Three-factor authentication

### 6.6.3 APPLICATIONS OF BIOMETRIC SYSTEMS

- 6.6.3.1 Government
- 6.6.3.2 Military and defense
- 6.6.3.3 Healthcare
- 6.6.3.4 Banking and finance
- 6.6.3.5 Consumer electronics
- 6.6.3.6 Travel and immigration
- 6.6.3.7 Automotive
- 6.6.3.8 Security
- 6.6.3.9 Others

### 6.7 INTELLIGENT VIRTUAL ASSISTANTS (IVAS)

TABLE 108 INTELLIGENT VIRTUAL ASSISTANTS: HUMAN AUGMENTATION MARKET, BY TYPE, 2019–2022 (USD BILLION)

TABLE 109 INTELLIGENT VIRTUAL ASSISTANTS: HUMAN AUGMENTATION MARKET, BY TYPE, 2023–2028 (USD BILLION)

TABLE 110 INTELLIGENT VIRTUAL ASSISTANTS: HUMAN AUGMENTATION MARKET, BY REGION, 2019–2022 (USD BILLION)

TABLE 111 INTELLIGENT VIRTUAL ASSISTANTS: HUMAN AUGMENTATION MARKET, BY REGION, 2023–2028 (USD BILLION)

#### 6.7.1 CHATBOTS

6.7.1.1 Rising adoption of chatbots to enhance customer engagement and operational efficiency to drive market

#### 6.7.2 SMART SPEAKERS

6.7.2.1 Increasing usage of smart speakers in smart homes to fuel segmental growth  
TABLE 112 INTELLIGENT VIRTUAL ASSISTANTS: HUMAN AUGMENTATION MARKET, BY APPLICATION, 2019–2022 (USD BILLION)

TABLE 113 INTELLIGENT VIRTUAL ASSISTANTS: HUMAN AUGMENTATION MARKET, BY APPLICATION, 2023–2028 (USD BILLION)

#### 6.7.3 APPLICATIONS OF INTELLIGENT VIRTUAL ASSISTANTS

- 6.7.3.1 Consumer
- 6.7.3.2 BFSI
- 6.7.3.3 Healthcare
- 6.7.3.4 Education
- 6.7.3.5 Retail
- 6.7.3.6 Government
- 6.7.3.7 Utilities
- 6.7.3.8 Travel and hospitality
- 6.7.3.9 Others

## **7 HUMAN AUGMENTATION MARKET, BY TECHNOLOGY**

### **7.1 INTRODUCTION**

### **7.2 ARTIFICIAL INTELLIGENCE (AI) INTEGRATION**

#### **7.2.1 AI-POWERED AUGMENTATION**

#### **7.2.2 COGNITIVE AUGMENTATION**

### **7.3 QUANTUM COMPUTING AUGMENTATION**

#### **7.3.1 QUANTUM-ENHANCED PROCESSING**

#### **7.3.2 QUANTUM COMMUNICATION**

### **7.4 BIOHACKING AND BIO-AUGMENTATION**

#### **7.4.1 GENETIC ENGINEERING**

#### **7.4.2 BRAIN-COMPUTER INTERFACES**

## **8 HUMAN AUGMENTATION MARKET, BY FUNCTIONALITY**

### **8.1 INTRODUCTION**

FIGURE 32 BODY-WORN SEGMENT TO REGISTER HIGHER CAGR IN HUMAN AUGMENTATION MARKET DURING FORECAST PERIOD

TABLE 114 HUMAN AUGMENTATION MARKET, BY FUNCTIONALITY, 2019–2022 (USD BILLION)

TABLE 115 HUMAN AUGMENTATION MARKET, BY FUNCTIONALITY, 2023–2028 (USD BILLION)

### **8.2 BODY WORN**

8.2.1 RISING ADOPTION OF WEARABLE DEVICES IN CONSUMER AND MEDICAL APPLICATIONS TO BOOST MARKET GROWTH

TABLE 116 BODY-WORN: HUMAN AUGMENTATION MARKET, BY TYPE, 2019–2022 (USD BILLION)

TABLE 117 BODY-WORN: HUMAN AUGMENTATION MARKET, BY TYPE, 2023–2028 (USD BILLION)

### **8.3 NON-BODY-WORN**

8.3.1 INCREASING ADOPTION OF NON-BODY-WORN PRODUCTS TO IMPROVE COGNITIVE AND SENSORY EXPERIENCES TO DRIVE MARKET

TABLE 118 NON-BODY-WORN: HUMAN AUGMENTATION MARKET, BY TYPE, 2019–2022 (USD BILLION)

TABLE 119 NON-BODY-WORN: HUMAN AUGMENTATION MARKET, BY TYPE, 2023–2028 (USD BILLION)

## **9 HUMAN AUGMENTATION MARKET, BY END USER**

## 9.1 INTRODUCTION

FIGURE 33 COMMERCIAL SEGMENT TO EXHIBIT HIGHEST CAGR IN HUMAN AUGMENTATION MARKET FROM 2023 TO 2028

TABLE 120 HUMAN AUGMENTATION MARKET, BY END USER, 2019–2022 (USD BILLION)

TABLE 121 HUMAN AUGMENTATION MARKET, BY END USER, 2023–2028 (USD BILLION)

## 9.2 CONSUMER

9.2.1 RISING ADOPTION OF WEARABLES DEVICES TO BOOST SEGMENTAL GROWTH

9.2.2 CASE STUDY: APPLE AND COCHLEAR COLLABORATED TO DEVELOP NUCLEUS 7 SOUND PROCESSOR

## 9.3 COMMERCIAL

9.3.1 GROWING ADOPTION OF AR AND VR TECHNOLOGIES IN COMMERCIAL APPLICATIONS TO ACCELERATE MARKET GROWTH

9.3.2 CASE STUDY: LOWE'S PARTNERED WITH EXOVR TO LEVERAGE VIRTUAL REALITY TECHNOLOGY FOR EMPLOYEE TRAINING

## 9.4 MEDICAL

9.4.1 IMPLEMENTATION OF HUMAN AUGMENTATION TECHNOLOGIES TO IMPROVE PATIENT CARE TO DRIVE SEGMENTAL GROWTH

9.4.2 CASE STUDY: EKSO BIONICS AND HOCOMA JOINED FORCES TO ENHANCE CAPABILITIES OF EKSO'S EXOSKELETONS

## 9.5 AEROSPACE & DEFENSE

9.5.1 RISING ADOPTION OF VR AND AR TECHNOLOGIES IN PILOT TRAINING TO DRIVE MARKET

9.5.2 CASE STUDY: RAYTHEON ADOPTED SMART GLASSES OFFERED BY VUZIX FOR MILITARY APPLICATIONS

## 9.6 INDUSTRIAL

9.6.1 RISING ADOPTION OF EXOSKELETONS IN MANUFACTURING TO DRIVE SEGMENTAL GROWTH

9.6.2 CASE STUDY: AIRBUS INTEGRATED DAQRI'S AUGMENTED REALITY HELMETS INTO ITS AIRCRAFT ASSEMBLY PROCESSES

## 9.7 OTHERS

# 10 HUMAN AUGMENTATION MARKET, BY REGION

## 10.1 INTRODUCTION

FIGURE 34 HUMAN AUGMENTATION MARKET TO REGISTER HIGHEST CAGR IN ASIA PACIFIC DURING FORECAST PERIOD

TABLE 122 HUMAN AUGMENTATION MARKET, BY REGION, 2019–2022 (USD BILLION)

TABLE 123 HUMAN AUGMENTATION MARKET, BY REGION, 2023–2028 (USD BILLION)

## 10.2 NORTH AMERICA

FIGURE 35 NORTH AMERICA: HUMAN AUGMENTATION MARKET SNAPSHOT

### 10.2.1 NORTH AMERICA: RECESSION IMPACT

TABLE 124 NORTH AMERICA: HUMAN AUGMENTATION MARKET, BY COUNTRY, 2019–2022 (USD BILLION)

TABLE 125 NORTH AMERICA: HUMAN AUGMENTATION MARKET, BY COUNTRY, 2023–2028 (USD BILLION)

TABLE 126 NORTH AMERICA: HUMAN AUGMENTATION MARKET, BY PRODUCT TYPE, 2019–2022 (USD BILLION)

TABLE 127 NORTH AMERICA: HUMAN AUGMENTATION MARKET, BY PRODUCT TYPE, 2023–2028 (USD BILLION)

### 10.2.2 US

10.2.2.1 Rising implementation of human augmentation technology in wearable devices to drive regional market growth

10.2.2.2 Case study: DHL collaborated with Ekso Bionics to deploy wearable exoskeletons for warehouse workers

### 10.2.3 CANADA

10.2.3.1 Increasing adoption of AR/VR technology in healthcare industry to fuel market growth

10.2.3.2 Case study: Bionik Laboratories partnered with TIRR Memorial Hermann Rehabilitation Hospital to pilot use of ARKE exoskeleton in stroke rehabilitation

### 10.2.4 MEXICO

10.2.4.1 Increasing investments in industrial automation to propel adoption of human augmentation technologies

10.2.4.2 Case study: GE partnered with RealWear to deploy wearable AR devices in industrial maintenance and service operations

## 10.3 EUROPE

FIGURE 36 EUROPE AMERICA: HUMAN AUGMENTATION MARKET SNAPSHOT

### 10.3.1 EUROPE: RECESSION IMPACT

TABLE 128 EUROPE: HUMAN AUGMENTATION MARKET, BY COUNTRY, 2019–2022 (USD BILLION)

TABLE 129 EUROPE: HUMAN AUGMENTATION MARKET, BY COUNTRY, 2023–2028 (USD BILLION)

TABLE 130 EUROPE: HUMAN AUGMENTATION MARKET, BY PRODUCT TYPE, 2019–2022 (USD BILLION)

**TABLE 131 EUROPE: HUMAN AUGMENTATION MARKET, BY PRODUCT TYPE, 2023–2028 (USD BILLION)****10.3.2 UK**

10.3.2.1 Increasing investments in AR/VR to fuel market growth

10.3.2.2 Case study: Airbus partnered with Magic Leap to introduce AR solutions into its aircraft design and maintenance operations

**10.3.3 GERMANY**

10.3.3.1 Rising adoption of human augmentation technologies in automotive and industrial sectors to drive market

10.3.3.2 Case study: Audi collaborated with Ottobock to develop specialized exoskeletons for employees

**10.3.4 FRANCE**

10.3.4.1 Increasing investments in smart infrastructure to fuel regional market growth

**10.3.5 REST OF EUROPE****10.4 ASIA PACIFIC****FIGURE 37 ASIA PACIFIC: HUMAN AUGMENTATION MARKET SNAPSHOT****10.4.1 ASIA PACIFIC: RECESSION IMPACT****TABLE 132 ASIA PACIFIC: HUMAN AUGMENTATION MARKET, BY COUNTRY, 2019–2022 (USD BILLION)****TABLE 133 ASIA PACIFIC: HUMAN AUGMENTATION MARKET, BY COUNTRY, 2023–2028 (USD BILLION)****TABLE 134 ASIA PACIFIC: HUMAN AUGMENTATION MARKET, BY PRODUCT TYPE, 2019–2022 (USD BILLION)****TABLE 135 ASIA PACIFIC: HUMAN AUGMENTATION MARKET, BY PRODUCT TYPE, 2023–2028 (USD BILLION)****10.4.2 CHINA**

10.4.2.1 Growing focus on industrialization and manufacturing expansion to foster market growth

10.4.2.2 Case study: OnePlus partnered with VR headset manufacturers to provide VR experiences on smartphones

**10.4.3 JAPAN**

10.4.3.1 Increasing adoption of robotics in industrial sector to drive market

10.4.3.2 Case study: Toyota collaborated with exoskeleton technology providers to provide exoskeletons for enhancing workers' movements

**10.4.4 SOUTH KOREA**

10.4.4.1 Government-led investments in medical devices to drive market

**10.4.5 INDIA**

10.4.5.1 Growing adoption of consumer electronics devices to contribute to market growth

#### 10.4.6 REST OF ASIA PACIFIC

#### 10.5 REST OF THE WORLD (ROW)

##### 10.5.1 ROW: RECESSION IMPACT

TABLE 136 ROW: HUMAN AUGMENTATION MARKET, BY REGION, 2019–2022  
(USD BILLION)

TABLE 137 ROW: HUMAN AUGMENTATION MARKET, BY REGION, 2023–2028  
(USD BILLION)

TABLE 138 ROW: HUMAN AUGMENTATION MARKET, BY PRODUCT TYPE,  
2019–2022 (USD BILLION)

TABLE 139 ROW: HUMAN AUGMENTATION MARKET, BY PRODUCT TYPE,  
2023–2028 (USD BILLION)

##### 10.5.2 MIDDLE EAST & AFRICA

10.5.2.1 Increasing government investments in development of innovative human  
augmentation products to enhance market growth

##### 10.5.3 SOUTH AMERICA

10.5.3.1 Rising technological advancements to drive adoption of human  
augmentation technologies

## 11 COMPETITIVE LANDSCAPE

### 11.1 INTRODUCTION

### 11.2 STRATEGIES ADOPTED BY KEY PLAYERS

TABLE 140 HUMAN AUGMENTATION MARKET: OVERVIEW OF STRATEGIES  
ADOPTED BY KEY PLAYERS

### 11.3 MARKET SHARE ANALYSIS, 2022

FIGURE 38 MARKET SHARE OF KEY PLAYERS, 2022

TABLE 141 HUMAN AUGMENTATION MARKET: MARKET SHARE ANALYSIS (2022)

#### 11.3.1 KEY PLAYERS IN HUMAN AUGMENTATION MARKET, 2022

### 11.4 REVENUE ANALYSIS OF KEY PLAYERS IN HUMAN AUGMENTATION MARKET

FIGURE 39 FIVE-YEAR REVENUE ANALYSIS OF KEY PLAYERS IN HUMAN  
AUGMENTATION MARKET

### 11.5 COMPANY EVALUATION MATRIX

#### 11.5.1 STARS

#### 11.5.2 EMERGING LEADERS

#### 11.5.3 PERVASIVE PLAYERS

#### 11.5.4 PARTICIPANTS

FIGURE 40 HUMAN AUGMENTATION MARKET (GLOBAL): COMPANY  
EVALUATION MATRIX, 2022



#### 11.5.5 COMPANY FOOTPRINT

TABLE 142 HUMAN AUGMENTATION MARKET: COMPANY PRODUCT FOOTPRINT

TABLE 143 HUMAN AUGMENTATION MARKET: COMPANY PRODUCT TYPE FOOTPRINT

TABLE 144 HUMAN AUGMENTATION MARKET: COMPANY TECHNOLOGY FOOTPRINT

TABLE 145 HUMAN AUGMENTATION MARKET: COMPANY FUNCTIONALITY FOOTPRINT

TABLE 146 HUMAN AUGMENTATION MARKET: COMPANY END-USER FOOTPRINT

TABLE 147 HUMAN AUGMENTATION MARKET: COMPANY REGION FOOTPRINT

#### 11.6 STARTUPS/SMES EVALUATION MATRIX

11.6.1 PROGRESSIVE COMPANIES

11.6.2 RESPONSIVE COMPANIES

11.6.3 DYNAMIC COMPANIES

11.6.4 STARTING BLOCKS

FIGURE 41 HUMAN AUGMENTATION MARKET: STARTUPS/SMES EVALUATION MATRIX, 2022

TABLE 148 HUMAN AUGMENTATION MARKET: DETAILED LIST OF KEY STARTUPS

11.6.5 COMPETITIVE BENCHMARKING

TABLE 149 HUMAN AUGMENTATION MARKET: STARTUP OVERALL FOOTPRINT

TABLE 150 HUMAN AUGMENTATION MARKET: STARTUP PRODUCT TYPE FOOTPRINT

TABLE 151 HUMAN AUGMENTATION MARKET: STARTUP TECHNOLOGY FOOTPRINT

TABLE 152 HUMAN AUGMENTATION MARKET: STARTUP FUNCTIONALITY FOOTPRINT

TABLE 153 HUMAN AUGMENTATION MARKET: STARTUP END-USER FOOTPRINT

TABLE 154 HUMAN AUGMENTATION MARKET: STARTUP REGION FOOTPRINT

#### 11.7 COMPETITIVE SCENARIOS AND TRENDS

TABLE 155 HUMAN AUGMENTATION MARKET: TOP PRODUCT LAUNCHES AND DEVELOPMENTS, FEBRUARY 2020 TO OCTOBER 2023

TABLE 156 HUMAN AUGMENTATION MARKET: TOP DEALS AND OTHER DEVELOPMENTS, JANUARY 2019 TO SEPTEMBER 2023

## 12 COMPANY PROFILES

(Business Overview, Products/Services/Solutions Offered, Recent Developments, and

*Human Augmentation Market by Wearable (Wristwear, Bodywear, Footwear, Eyewear), AR (Head-mounted display), VR...*

MnM View (Key strengths/Right to Win, Strategic Choices Made, and Weaknesses and Competitive Threats))\*

## 12.1 KEY PLAYERS

### 12.1.1 SAMSUNG

TABLE 157 SAMSUNG: COMPANY OVERVIEW

FIGURE 42 SAMSUNG: COMPANY SNAPSHOT

TABLE 158 SAMSUNG: PRODUCTS/SERVICES/SOLUTIONS OFFERED

TABLE 159 SAMSUNG: PRODUCT LAUNCHES

TABLE 160 SAMSUNG: DEALS

### 12.1.2 ALPHABET

TABLE 161 ALPHABET: COMPANY OVERVIEW

FIGURE 43 ALPHABET: COMPANY SNAPSHOT

TABLE 162 ALPHABET: PRODUCTS/SERVICES/SOLUTIONS OFFERED

TABLE 163 ALPHABET: PRODUCT LAUNCHES

TABLE 164 ALPHABET: DEALS

### 12.1.3 APPLE INC.

TABLE 165 APPLE INC.: COMPANY OVERVIEW

FIGURE 44 APPLE INC.: COMPANY SNAPSHOT

TABLE 166 APPLE INC.: PRODUCTS/SERVICES/SOLUTIONS OFFERED

TABLE 167 APPLE INC.: PRODUCT LAUNCHES

### 12.1.4 MICROSOFT

TABLE 168 MICROSOFT: COMPANY OVERVIEW

FIGURE 45 MICROSOFT: COMPANY SNAPSHOT

TABLE 169 MICROSOFT: PRODUCTS/SERVICES/SOLUTIONS OFFERED

TABLE 170 MICROSOFT: PRODUCT LAUNCHES

TABLE 171 MICROSOFT: DEALS

### 12.1.5 META

TABLE 172 META: COMPANY OVERVIEW

FIGURE 46 META: COMPANY SNAPSHOT

TABLE 173 META: PRODUCTS/SERVICES/SOLUTIONS OFFERED

TABLE 174 META: PRODUCT LAUNCHES

TABLE 175 META: DEALS

### 12.1.6 SONY GROUP CORPORATION

TABLE 176 SONY GROUP CORPORATION: COMPANY OVERVIEW

FIGURE 47 SONY GROUP CORPORATION: COMPANY SNAPSHOT

TABLE 177 SONY GROUP CORPORATION: PRODUCTS/SERVICES/SOLUTIONS OFFERED

TABLE 178 SONY GROUP CORPORATION: PRODUCT LAUNCHES

TABLE 179 SONY GROUP CORPORATION: DEALS

#### 12.1.7 EKSO BIONICS

TABLE 180 EKSO BIONICS: COMPANY OVERVIEW

FIGURE 48 EKSO BIONICS: COMPANY SNAPSHOT

TABLE 181 EKSO BIONICS: PRODUCTS/SERVICES/SOLUTIONS OFFERED

TABLE 182 EKSO BIONICS: PRODUCT LAUNCHES

TABLE 183 EKSO BIONICS: DEALS

#### 12.1.8 VUZIX

TABLE 184 VUZIX: COMPANY OVERVIEW

FIGURE 49 VUZIX: COMPANY SNAPSHOT

TABLE 185 VUZIX: PRODUCTS/SERVICES/SOLUTIONS OFFERED

TABLE 186 VUZIX: PRODUCT LAUNCHES

TABLE 187 VUZIX: DEALS

#### 12.1.9 GARMIN LTD.

TABLE 188 GARMIN LTD.: COMPANY OVERVIEW

FIGURE 50 GARMIN LTD.: COMPANY SNAPSHOT

TABLE 189 GARMIN LTD.: PRODUCTS/SERVICES/SOLUTIONS OFFERED

TABLE 190 GARMIN LTD.: PRODUCT LAUNCHES

TABLE 191 GARMIN LTD.: DEALS

#### 12.1.10 FOSSIL GROUP INC.

TABLE 192 FOSSIL GROUP INC.: COMPANY OVERVIEW

FIGURE 51 FOSSIL GROUP INC.: COMPANY SNAPSHOT

TABLE 193 FOSSIL GROUP INC.: PRODUCTS/SERVICES/SOLUTIONS OFFERED

TABLE 194 FOSSIL GROUP INC.: PRODUCT LAUNCHES

#### 12.1.11 B-TEMIA

TABLE 195 B-TEMIA: COMPANY OVERVIEW

TABLE 196 B-TEMIA: PRODUCTS/SERVICES/SOLUTIONS OFFERED

TABLE 197 B-TEMIA: PRODUCT LAUNCHES

TABLE 198 B-TEMIA: DEALS

#### 12.1.12 CASIO COMPUTER CO., LTD.

TABLE 199 CASIO COMPUTER CO., LTD.: COMPANY OVERVIEW

FIGURE 52 CASIO COMPUTER CO., LTD.: COMPANY SNAPSHOT

TABLE 200 CASIO COMPUTER CO., LTD.: PRODUCTS/SERVICES/SOLUTIONS OFFERED

TABLE 201 CASIO COMPUTER CO., LTD.: PRODUCT LAUNCHES

#### 12.1.13 REWALK ROBOTICS

TABLE 202 REWALK ROBOTICS: COMPANY OVERVIEW

FIGURE 53 REWALK ROBOTICS: COMPANY SNAPSHOT

TABLE 203 REWALK ROBOTICS: PRODUCTS/SERVICES/SOLUTIONS OFFERED

#### 12.1.14 CYBERDYNE INC.

TABLE 204 CYBERDYNE INC.: COMPANY OVERVIEW

FIGURE 54 CYBERDYNE INC.: COMPANY SNAPSHOT

TABLE 205 CYBERDYNE INC.: PRODUCTS/SERVICES/SOLUTIONS OFFERED

## 12.2 OTHER PLAYERS

12.2.1 MAGIC LEAP, INC.

12.2.2 POLAR ELECTRO

12.2.3 P&S MECHANICS CO., LTD.

12.2.4 LIFESENSE

12.2.5 HK SMARTMV LIMITED

12.2.6 REX BIONICS LTD.

12.2.7 ATHEER, INC

12.2.8 CORTIGENT

12.2.9 INBENTA HOLDINGS INC.

12.2.10 MYCROFT AI, INC.

12.2.11 CYBERGLOVE SYSTEMS INC.

12.2.12 SCOPE AR

12.2.13 MERGE LABS, INC.

12.2.14 WEARABLE ROBOTICS SRL

12.2.15 GOQII

\*Details on Business Overview, Products/Services/Solutions Offered, Recent Developments, and MnM View (Key strengths/Right to Win, Strategic Choices Made, and Weaknesses and Competitive Threats) might not be captured in case of unlisted companies.

## 13 APPENDIX

13.1 DISCUSSION GUIDE

13.2 KNOWLEDGESTORE: MARKETSANDMARKETS' SUBSCRIPTION PORTAL

13.3 CUSTOMIZATION OPTIONS

13.4 RELATED REPORTS

13.5 AUTHOR DETAILS

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