WinterGreen Research, Inc.

Wearable Robots, Exoskeletons: Market Shares, Market Strategies, and Market Forecasts, 2019 to 2025

Mountains of Opportunity

Picture by Susan Eustis

WinterGreen Research, Inc.

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WINTERGREEN RESEARCH

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CHECK OUT THESE KEY TOPICS

Wearable Robots, Exoskeleton Applications: Medical, Warfighter, First Responder, Manufacturing, Shipbuilding, Warehouse, and Construction

Medical Exoskeleton	Strengthen The Lower Extremity	Wrist Work Exoskeleton
Warfighter Exoskeleton	Hand Assembly Exoskeleton	Exoskeleton Software
First Responder Exoskeleton	Warehouse Exoskeleton	Anti-Gravity Exoskeleton
Industrial Exoskeleton	Shipbuilding Exoskeleton	Wearable Robot Manufacturing
Exoskeletons	Aerospace Exoskeleton	Wearable Robot Shipbuilding,
Robotic Technologies Leverage Neuroplasticity	Walking Assist Exoskeleton	Wearable Robot Warehouse
Wearable Robotics	Work Efficiency Exoskeleton	Wearable Robot Construction
Strengthen The Upper Extremity	Measurement	
Wearable Robots	Physical Automation	
	Hip Work Exoskeleton	

Smart Wearable Robots: Exoskeleton Systems Bring Automated Process to Personal Movement and Personal Lifting

Wearable Robots, Exoskeletons: Market Shares, Market Strategies, and Market Forecasts, 2019 to 2025

Exoskeletons: Technology Improves Strength for Patients and Warfighters, Increases Industrial Safety

LEXINGTON, Massachusetts (February 3, 2019) – WinterGreen Research announces that it has published a new study Wearable Exoskeleton Robots: Market Shares, Strategy, and Forecasts, Worldwide, 2019 to 2025. Wearable Robots leverage better technology, they support high quality, lightweight materials and long life batteries. Wearable robots, exoskeletons are used for permitting workers to lift 250 pounds and not get hurt while lifting, this is as close to superhuman powers as the comic books have imagined. The exoskeletons are used to assist patients with disabilities and war fighters with enormous excess baggage. Exoskeletons are as easy to use as getting dressed in the morning: Designs with multiple useful features are available. The study has 525 pages and 181 tables and figures.

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Industrial workers and warfighters can perform at a higher level when wearing an exoskeleton. Exoskeletons can enable aerospace workers to work more efficiently when building or repairing airplanes. Industrial robots are very effective for ship building where heavy lifting can injure workers.

Exoskeleton devices have the potential to be adapted further for expanded use in every aspect of medical rehabilitation, industry, the military, and for first responders. Workers benefit from powered human augmentation technology because they can offload some of the dangerous part of lifting and supporting heavy tools. Robots assist wearers with lifting activities, improving the way that a job is performed and decreasing the quantity of disability. For this reason, it is anticipated that industrial exoskeleton robots will have very rapid adoption once they are fully tested and proven to work effectively for a particular task.

Exoskeletons are being developed in the U.S., China, Korea, Japan, and Europe. They are generally intended for medical, logistical and engineering purposes, due to their short range and short battery life. Most exoskeletons can operate independently for several hours. Chinese manufacturers express hope that upgrades to exoskeletons extending the battery life could make them suitable for frontline infantry in difficult environments, including mountainous terrain.

Exoskeletons are capable of transferring the weight of heavy loads to the ground through powered legs without loss of human mobility. This can increase the distance that soldiers can cover in a day, or increase the load that they can carry though difficult terrain. Exoskeletons can significantly reduce operator fatigue and exposure to injury. Industrial robots help with lifting, walking, and sitting Exoskeletons can be used to access efficiency of movement and improve efficiency.

Medical and military uses have driven initial exoskeleton development. Industrial workers and warfighters can perform at a higher level when wearing an exoskeleton. Exoskeletons can enable aerospace workers to work more efficiently when building or repairing airplanes. Industrial robots are very effective for ship building where heavy lifting can injure workers. New market opportunities of building and repair in the infrastructure, aerospace, and shipping industries offer large opportunity for growth of the exoskeleton markets.

Wearable robots, exoskeletons units are evolving additional functionality rapidly. Wearable robots functionality is used to assist to personal mobility via exoskeleton robots. They promote upright walking and relearning of lost functions for stroke victims and people who are paralyzed. Exoskeletons are helping people relearn to move after a stroke by creating new muscle memory. Exoskeleton s deliver higher quality rehabilitation, provide the base for a growth strategy for clinical facilities.

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In the able-bodied field, Ekso, Lockheed Martin, Sarcos / Raytheon, BAE Systems, Panasonic, Honda, Daewoo, Noonee, Revision Military, and Cyberdyne are each developing some form of exoskeleton for military and industrial applications. The field of robotic exoskeleton technology remains in its infancy.

Exoskeleton Wearable Robots markets at $130 million in 2018 are anticipated to reach $5.2 billion by 2025. Most of the measurable revenue in 2018 is from medical exoskeletons. New technology from a range of vendors provides multiple designs that actually work and will be on the market soon. This bodes well for market development.

WinterGreen Research is an independent research organization funded by the sale of market research studies all over the world and by the implementation of ROI models that are used to calculate the total cost of ownership of equipment, services, and software. The company has 35 distributors worldwide, including Global Information Info Shop, Market Research.com, Research and Markets, electronics.ca, and Thompson Financial. WinterGreen Research is positioned to help customers facing challenges that define the modern enterprises. The increasingly global nature of science, technology and engineering is a reflection of the implementation of the globally integrated enterprise. Customers trust wintergreen research to work alongside them to ensure the success of the participation in a particular market segment.

WinterGreen Research supports various market segment programs; provides trusted technical services to the marketing departments. It carries out accurate market share and forecast analysis services for a range of commercial and government customers globally. These are all vital market research support solutions requiring trust and integrity.

Key words: Exoskeleton, Active Prostheses, Exoskeletons , Robotic Technologies Leverage Neuroplasticity, Wearable Robotics, Strengthen The Upper Extremity, Strengthen The Lower Extremity, Hand Rehabilitation, Physical Therapy Automation, Recovery After Hip Injury, Wrist Rehabilitation, Stroke Rehabilitation, Exoskeleton Software, Hip Rehabilitation, Anti-Gravity Treadmill, Spinal, Warehouse exoskeleton, Shipbuilding exoskeleton, Aerospace exoskeleton, Walking assist exoskeleton, Work Efficiency Exoskeleton Measurement, Cord Injury Rehabilitation, Wrist Rehabilitation, Stroke Rehabilitation, Exoskeleton Software, Hip Rehabilitation, Anti-Gravity Treadmill, Gait Training, Spinal Cord Injury Rehabilitation, Paraplegic Walking, Wearable Robot Stroke Recovery, Wearable Robot Manufacturing , Wearable Robot Shipbuilding,, Wearable Robot Warehouse, Wearable Robot Construction,

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Companies Profiled

Market Leaders

Ekso Bionics
Lockheed Martin
BAE Systems
Honda
Noonee
China North Industries Group Corporation (NORINCO)
Rex Bionics
Cyberdyne
Sarcos / Raytheon
Daewoo
Panasonic
Daewoo
Revision Military
Parker Hannifin
Sarcos

Market Participants

AlterG
Ekso Bionics
Hocoma
Parker Hannifin
Revision Military
ReWalk Robotics
RexBionics
Rostec
Sarcos
University of Twente
Catholic University of America
United Instrument Manufacturing Corporation
Bionik Laboratories / Interactive Motion Technologies (IMT)
Catholic University of America
Fanuc
Interaxon
KDM
Lopes Gait Rehabilitation Device
MRISAR
Myomo
Orthocare Innovations
Reha Technology
Robotdalen
Sarcos
Shepherd Center
Socom (U.S. Special Operations Command)
Trek Aerospace
United Instrument Manufacturing Corporation

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Wearable Robots, Exoskeletons: Market Shares, Market Strategies, and Market Forecasts, 2019 to 2025

Report Methodology

This is the 814th report in a series of primary market research reports that provide forecasts in communications, telecommunications, the Internet, computer, software, telephone equipment, health equipment, and energy. Automated process and significant growth potential are priorities in topic selection. The project leaders take direct responsibility for writing and preparing each report. They have significant experience preparing industry studies. Forecasts are based on primary research and proprietary data bases.

The primary research is conducted by talking to customers, distributors and companies. The survey data is not enough to make accurate assessment of market size, so WinterGreen Research looks at the value of shipments and the average price to achieve market assessments. Our track record in achieving accuracy is unsurpassed in the industry. We are known for being able to develop accurate market shares and projections. This is our specialty.

The analyst process is concentrated on getting good market numbers. This process involves looking at the markets from several different perspectives, including vendor shipments. The interview process is an essential aspect as well. We do have a lot of granular analysis of the different shipments by vendor in the study and addenda prepared after the study was published if that is appropriate.

Forecasts reflect analysis of the market trends in the segment and related segments. Unit and dollar shipments are analyzed through consideration of dollar volume of each market participant in the segment. Installed base analysis and unit analysis is based on interviews and an information search. Market share analysis includes conversations with key customers of products, industry segment leaders, marketing directors, distributors, leading market participants, opinion leaders, and companies seeking to develop measurable market share.

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Over 200 in depth interviews are conducted for each report with a broad range of key participants and industry leaders in the market segment. We establish accurate market forecasts based on economic and market conditions as a base. Use input/output ratios, flow charts, and other economic methods to quantify data. Use in-house analysts who meet stringent quality standards.

Interviewing key industry participants, experts and end-users is a central part of the study. Our research includes access to large proprietary databases. Literature search includes analysis of trade publications, government reports, and corporate literature.

Findings and conclusions of this report are based on information gathered from industry sources, including manufacturers, distributors, partners, opinion leaders, and users. Interview data was combined with information gathered through an extensive review of internet and printed sources such as trade publications, trade associations, company literature, and online databases. The projections contained in this report are checked from top down and bottom up analysis to be sure there is congruence from that perspective.

The base year for analysis and projection is 2018. With 2012 and several years prior to that baseline, market projections were developed for 2019 through 2025. These projections are based on a combination of a consensus among the opinion leader contacts interviewed combined with understanding of the key market drivers and their impact from a historical and analytical perspective.

The analytical methodologies used to generate the market estimates are based on penetration analyses, similar market analyses, and delta calculations to supplement independent and dependent variable analysis. All analyses are displaying selected descriptions of products and services.

This research includes referencde to an ROI model that is part of a series that provides IT systems financial planners access to information that supports analysis of all the numbers that impact management of a product launch or large and complex data center. The methodology used in the models relates to having a sophisticated analytical technique for understanding the impact of workload on processor consumption and cost.
WinterGreen Research has looked at the metrics and independent research to develop assumptions that reflect the actual anticipated usage and cost of systems. Comparative analyses reflect the input of these values into models.

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The variables and assumptions provided in the market research study and the ROI models are based on extensive experience in providing research to large enterprise organizations and data centers. The ROI models have lists of servers from different manufacturers, Systems z models from IBM, and labor costs by category around the world. This information has been developed from WinterGreen research proprietary data bases constructed as a result of preparing market research studies that address the software, energy, healthcare, telecommunicatons, and hardware businesses.

YOU MUST HAVE THIS STUDY

Wearable Robots, Exoskeletons: Market Shares, Market Strategies, and Market Forecasts, 2019 to 2025

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Exoskeleton robotic devices automate process in a manner that significantly extends the time rehabilitation is useful, dramatically increasing the value of the rehabilitation. Advanced Exoskeleton technologies are associated with emerging rehabilitation systems that are used to improve the quality of life for people with disabilities. Technologies that make exoskeletons feasible are closely associated with new materials and smaller, lighter, more feature loaded electronics, software, and sensors.

Wearable Robots, Exoskeletons Executive Summary

The study is designed to give a comprehensive overview of the Wearable Robots, Exoskeletons market segment. Research represents a selection from the mountains of data available of the most relevant and cogent market materials, with selections made by the most senior analysts. Commentary on every aspect of the market from independent analysts creates an independent perspective in the evaluation of the market. In this manner the study presents a comprehensive overview of what is going on in this market, assisting managers with designing market strategies likely to succeed.

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List of Tables and Figures

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ABOUT THE COMPANY

WinterGreen Research, founded in 1985, provides strategic market assessments in telecommunications, communications equipment, health care, Software, Internet, Energy Generation, Energy Storage, Renewable energy, and advanced computer technology.

Industry reports focus on opportunities that expand existing markets or develop major new markets. The reports access new product and service positioning strategies, new and evolving technologies, and technological impact on products, services, and markets. Innovation that drives markets is explored. Market shares are provided. Leading market participants are profiled, and their marketing strategies, acquisitions, and strategic alliances are discussed. The principals of WinterGreen Research have been involved in analysis and forecasting of international business opportunities in telecommunications and advanced computer technology markets for over 30 years.

The studies provide primary analytical insight about the market participants. By publishing material relevant to the positioning of each company, readers can look at the basis for analysis. By providing descriptions of each major participant in the market, the reader is not dependent on analyst assumptions, the information backing the assumptions is provided, permitting readers to examine the basis for the conclusions.

WinterGreen Research is positioned to help customers facing challenges that define the modern enterprises. The increasingly global nature of science, technology and engineering is a reflection of the implementation of the globally integrated enterprise. Customers trust wintergreen research to work alongside them to ensure the success of the participation in a particular market segment.

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ABOUT THE PRINCIPAL AUTHORS

Susan Eustis, President, co-founder of WinterGreen Research, is a senior analyst. She has done research in communications, healthcare equipment, and computer markets and applications. She holds several patents in microcomputing and parallel processing. She has the original patents in electronic voting machines. She has new patent applications in format varying, mulitprocessing, and electronic voting. She is the author of recent studies of the Internet, Cloud Computing marketing strategies, Internet equipment, biometrics, a study of Helathcare Equipment, Worldwide Telecommunications Equipment, Top Ten Telecommunications, Digital Loop Carrier, Web Hosting, Web Services, and Application Integration markets.

Ms. Eustis is a graduate of Barnard College. Ms. Eustis was named Top Woman CEO in 2012 by Who's Who Worldwide. She was named Top Woman Market Research Analyst the same year and successive years 2013,2014,2015, 2016, 2017, and 2018 thereafter. She has been featured twice on the cover of Women of Distinction. She was cited in a recent Time Magazine article and major media articles on Youth Sports market growth. She was also featured in recent Wall Street Journal, New York Times, Barron's, Bloomberg, HBO, and London Times articles.

About the WinterGreen Research Team: The WinterGreen Research Team is comprised of senior analysts that prepare the market research and analysis that is offered to the client and developed using an iterative process to achieve a final study. Typical projects include providing market/viability research. The team can look at how drones can be applied to critical infrastructures safety, including: type of market existing, Barriers, Forecast demand and competitors, SWOT and competitive advantages, Price Analysis, product design recommendations (marketing orientation).

Research is typically for many different regions or localities, for example EU countries including Spain, UK, Nordic, Germany, and France. Typical projects profile the United States and areas of Asia. It is common to three representative countries from South America, Brazil, Argentina, Chile, and Mexico. Representative countries from Asia APAC typically include Japan, China, India, and Australia.

Critical infrastructure safety, including: type of market existing, barriers to entry and to faithful execution of product provision, forecast of demand, market share, SWOT, competitive advantage of major competitors, identification of new technologies and new companies, price performance analysis, product design recommendations, and marketing considerations are typical topics covered.

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