

5th International Conference on Mechatronics, Automation and Smart Materials: Market analysis

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The smart materials, automation, and mechatronics market is growing at a considerable rate due to the high convenience offering property of the smart materials technology as well as mechatronics and recent automation to the increasing aging population in the world. One of the major trends that can be seen in the smart materials industry is smart packaging in consumer goods. The main focus of the mechanical and material manufacturers is expected to be on better design and optimal use of materials for producing packages that could easily be opened. Investment in research and development is increasing due to factors such as reducing waste, legislation and, demand for a higher quality of life from the consumer end. The smart materials market is expected to grow in the coming years due to a rise in demand for smart materials from the construction industry.

A material is considered as a smart material when the input stimulus of a variable changes the output of other variables that were not given as input. If there is a shift in external conditions such as light, strain, temperature, and energy, then smart materials will alter some of their characteristics with regard to environmental change. The reaction of different smart materials varies with the chemical structure of the materials. The smart materials, automation and mechatronics market is growing at a considerable rate due to the high convenience offering a property of the smart materials technology as well as mechatronics and recent automation to the increasing aging population in the world. One of the major trends that can be seen in the smart materials industry is smart packaging in consumer goods. The main focus of the mechanical and material manufacturers is expected to be on better design and optimal use of materials for producing packages that could easily be opened. Investment in research and development is increasing due to factors such as reducing waste, legislation and, demand for a higher quality of life from the consumer end. The smart materials market is expected to grow in the coming years due to a rise in demand of the smart materials from the construction industry.

A material is considered as a smart material when the input stimulus of a variable changes the output of other variables that were not given as input. If there is a shift in external conditions such as light, strain, temperature, and energy, the smart materials will change some of their properties with respect to environmental change. Suitably designed structures are made from smart materials that can expand, bend or contract when a voltage or electricity is applied to them. Because of its certain properties such as lightweight, usability, performance enhancement and preventive maintenance facility, smart materials are required. The growing use of piezoelectric devices and the emerging artificial organ and bionics industries are some of the factors that drive smart materials market growth. An increasing the number of end-user applications for smart materials is an opportunity for the smart materials market to grow at a considerable rate in the coming years. A difficulty in turning research and development into end-user applications for

smart materials is a factor that to some degree restricts the growth of the smart materials industry.

Mechatronics and automations include many engineering domains in one field like computer science engineering, electronics engineering, mechanical engineering, and other engineering domain. With the help of mechatronics and automation now the robot can express their emotions. Thanks to mechatronics and Artificial intelligence as well as recent automations, now we have smart home technology, smart voice assistant, self-driving cars and many more. Also, thanks to all researchers and engineers to make this field very important in the market. Automations and mechatronics are now widely used in military, security, construction, and field of medical, agriculture, household operation, and education.

The mechatronics and automation market are divided under North America, Europe, and Asia Pacific and the rest of the world. Europe precedes the mechatronics market at the highest usage of industrial robots. The Asia Pacific exhibits the fastest growth in the automation market, majorly due to the presence of emerging countries like China, Japan, South Korea, and Taiwan.

According to resource the mechatronics market was valued at USD 31.77 billion in 2018 and is expected to register a CAGR of 25% over the forecast period of 2019-2024. In the field of automation, Gartner predicts the business value will reach \$3.8T in 2022 and IDC predicts worldwide spending on cognitive and automation systems will reach \$77.8B in 2022. In this sense the change in the environment and react to it by varying their properties for adopting the surroundings. Suitably designed structures are made from smart materials that can expand, bend or contract when a voltage or electricity is applied to them. Because of its certain properties such as lightweight, usability, performance optimization and preventive maintenance facility, smart materials are required. The increasing use of piezoelectric devices and the burgeoning artificial organ and bionics industries are some of the factors that drive smart materials market growth. An increase in the number of end-user applications for smart materials is an opportunity in the coming years for the smart materials market to expand at a significant rate. A difficulty in turning research and development into end-user applications for smart materials is a factor that to some degree restricts the growth of the smart materials industry.

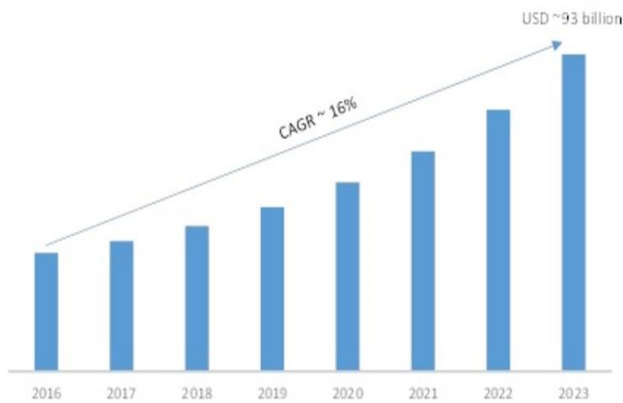
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According to resource the mechatronics market was valued at USD 31.77 billion in 2018 and is expected to register a CAGR of 16% over the forecast period of 2016-2023. In the field of automation, Gartner predicts the business value will reach \$77.8 B in 2022 and IDC predicts worldwide spending on cognitive and automation systems will reach \$93 B in 2023.



Target Audience

- Students
- Business Entrepreneurs
- Industry professionals
- Directors/Managers/CEO's
- Presidents & Vice Presidents
- Research faculty
- Providers of Robotics and AI Services
- Brand Manufacturers/ Marketers of Consumer Products
- Marketing, Advertising and Promotion Agency Executives

Supporting Journals:

Journal of Psychology and Cognition

Journal of Aquaculture Engineering & Fisheries Research

Journal of Neuroinformatics and Neuroimaging