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# Automated 3D Printing Market Research Report – Forecast till 2027

Report / Search Code: MRFR/SEM/5809-HCR

Publish Date: September, 2023

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## Description:

### Automated 3D Printing Market Overview

According to the latest research report, the automated 3D printing market is predicted to witness magnificent growth during the forecast period. Robotics arms and other electronic devices are used to execute 3D printing jobs in settings that are either too essential or too tiresome for human involvement, resulting in increased monetary and operational efficiency for the end-users. Material is connected or hardened under the direction of a computer to produce a three-dimensional object, with the material being added together as it is printed. 3D printing is becoming more popular (such as liquid molecules being fused together). Rapid prototyping systems and additive manufacturing systems both make use of 3D printing technology. It is possible for an object's form or geometry to be of any kind, and it is usually created using electronic model data from a 3D model or another electronic data source.

With the increasing adoption rate across sectors over the past several years, 3D printing has consistently undergone a transition from the prototype and small-batch phase to mass production technology. As a result, both industrial and non-printer suppliers have moved their emphasis to automation. Also, the progression of 3d printing machines from standalone systems used for prototyping, cutting tools, and single-part production to being used as core systems within fully integrated mass production lines is increasing the number of opportunities in the emerging lights-out factories, which is driving the number of jobs in the industry.

This report contains all the information on the automated 3D printing market its strengths. The report also contains the culmination of dynamics, segmentation, key players, regional analysis, and other important factors. And a detailed analysis of the global automated 3D printing market analysis forecast for 2023 is also included in the report.

### Covid 19 Analysis

The entire 3D printing market will see a reduction in the amount of potential income that may be produced in the near future. Taking the pharmaceutical industry as an example, the projected revenue decline for 2025 is expected to be USD 6.3; nevertheless, this is a much better outcome than what many other sectors would be experiencing right now as a result of the different consequences of COVID-19. Although the 3D printing factory is supposed to recover to double-digit growth rates as early as next year, the fact that the industry is due to leave to the double rates of growth as early as next year is definitely beneficial for new players who intend to enter the market in the coming years.

### Market Dynamic

#### • Drivers

One of the primary drivers of the Automated 3D Printing Market is the increasing usage of this technology in a variety of applications in the healthcare sector, including transplant, medication delivery, 3D printed organs, and a variety of other applications. The Automated 3D Printing market is also being driven by rising demand for implant modifications during surgical operations, which is being accompanied by increased R&D expenditures. The broad range of 3D printing applications in healthcare is one of the factors contributing to the growing popularity of the technology. The increasing variety of applications, coupled with the decreasing cost of 3D Printing and printers, will drive the development of the 3D Printing market growth in the coming years.

#### • Opportunities

Some of the reasons driving the development of the market include a rise in the demand for 3D printing in the healthcare sector, as well as technological advancements. Furthermore, rising research and development efforts are assisting in the creation of novel therapies for a variety of illnesses, which is assisting in the growth of the 3D Printed Medical Devices Market as well.

#### • Restraints

Over the projection period, it is expected that the high choice of manufacturing, a lack of uniformity in procedures, and a shortage of resources would impede the market's development further.

#### • Challenges

In the Automated 3D Printing Market, the high price of 3D printers is one of the most significant obstacles to growth. Stereolithography, laser beam, electron beam, powder bed fusion, and drop deposition methods, to name a few, are prohibitively expensive technologies. Commercial and tourism printers, which are usually utilized in the healthcare industry and cost about \$10,000, are too expensive for most institutions to purchase and install. While 3D Printed goods have the potential to lower the cost of finished products while simultaneously increasing efficiency, the high cost of 3D Printers continues to be a significant barrier to their widespread adoption.

## Cumulative Growth Analysis

In the wake of the rapid growth of 3D printing technology, industries such as oil and gas extraction, medical technology, as well as aerospace and automotive, which rely on composite materials to create strong yet lightweight material structures, are constrained by labor-intensive processes and geometric limitations, which can be overcome by utilizing robotic technologies. The robotic composite 3D demonstration from Stratasys, driven by Siemens software, for example, offers composites 3D printing via the use of an 8-axis motion system.

Freeform 3D printing manufacturing with a multi-axis robotic arm can also be used in environments where 3D printers must move in a variety of directions and angles, allowing for greater freedom in the creation of complex figures. The ability of the robotic arm to better manage raw materials is what is driving the growth of Freeform production in the manufacturing industry.

## Value Chain Analysis

According to the reports, the global automated 3D printing market is segmented on the basis of offering, process, end-users, and regions. When compared to the other kinds of 3D printing, SLS printing has dominated the Automated 3D Printing Market. The SLS Printer prints new things on a powdered material substrate, which is created by a powdered substance. The powder is drawn into the form of the item by a laser, which then fuses the powder together. After that, a fresh layer of powder is applied, and the procedure is repeated, building up each layer one by one until the item is completed. Laser sintering is a technique for creating things out of plastic, metal, and ceramic materials. Using this kind of printer, the degree of detail is only limited by how accurate it can be with the laser and how good the powder is, making it possible to build intricate and delicate structures. Printers that utilize fused deposition modeling are more widespread and less costly than printers that use selective laser sintering. Their uses, on the other hand, are presently restricted.

## Segmentation Overview

The Automated 3D Printing Market is segmented on the basis of offering, process, end-users, and regions. The global automated 3D printing market trends are expected to witness decent growth during the forecast period.

### By Application

Based on the application, the market is segmented into Automated Production, Part Handling, Material Handling, Multiprocessing, and Post-Processing

### By end-users

Based on the propulsion types, the market is segmented into Aerospace & Defense, Industrial-Manufacturing, High-Tech Equipment, and Engineering, Automotive, Healthcare, and Others.

## Regional Analysis

According to the reports, on the basis of the region, the global automated 3D printing market is divided into North America, Europe, Asia Pacific, and the rest of the world. North America is the largest market in the Automated 3D Printing Market, accounting for 39 percent of the overall market share in 2020. Europe is the second-largest market. The United States is making significant contributions to the growth and expansion of the market in the Americas. Stereolithography (SLA) is a prominent technique in the 3D printing industry in the Americas regions, with a significant share of the market. Since its inception in modeling and prototyping, SLA has continued to advance beyond its original use in healthcare, thanks to the development of a range of processes in 3D printing technology. The technique is capable of creating geometrical patterns that are both extremely intricate and uniquely created. The Automated 3D Printing Market in the Asia Pacific area is expanding at a rapid rate, owing to the increasing use of 3D Printing across a wide range of applications in the APAC region. According to projections, the usage of plastic materials in Automated 3D Printing will increase at an astounding pace. By 2020, it is anticipated that the entire amount of plastics transported for medical printing applications would exceed 570 tonnes.

## Competitive landscape

It is a highly competitive market with several major players all competing for a larger share of the market. However, the top players have gained a significant percentage of customers and are also investing in research and development, partnering with hardware makers, and other innovations in order to gain a larger share of the market. Stratasys Ltd., 3D Systems Corporation, and The ExOne Company, among others, are some of the major 3D printing companies in the industry.

## Major Key Players

- Stratasys (Israel)
- ExOne(US)
- 3D Systems (US)
- Materialise (Belgium)
- Universal Robot (Denmark)
- Formlabs (US)

- EOS GmbH (Germany)
- SLM Solutions (Germany)
- Concept Laser (Germany)
- Coobx (Liechtenstein)
- Authentise (US)
- Renishaw (UK)
- NVBOTS (US)
- PostProcess Technologies (US)
- DWS System (Italy)

## Report Overview

The following report comprises of –

- Market overview
- Covid 19 Analysis
- Market Dynamic
- Drivers
- Opportunities
- Restraints
- Challenges
- Cumulative Growth Analysis
- Value Chain Analysis
- Segmentation Overview
- Regional Analysis
- Competitive landscape

## Recent Developments

- At the RAPID + TCT Show in Pittsburgh, Stratasys Ltd. revealed a new product in development, the Stratasys Continuous Build 3D Demonstrator, which is now in beta testing. The device is intended to manufacture components in a continuous way with little human involvement, automatically ejecting finished parts and initiating new ones as the process is completed. The creation of this device has assisted the business in setting new industry benchmarks for the throughput of additive manufacturing.

## Automated 3D Printing Market, By Offering

- Hardware
- Software
- Services

## Automated 3D Printing Market, By Process

- Automated Production
- Part Handling
- Material Handling
- Multiprocessing
- Post-Processing

## Automated 3D Printing Market, By End-User

- Aerospace & Defense
- Industrial-Manufacturing, High-Tech Equipment, and Engineering
- Automotive
- Healthcare
- Others

## Automated 3D Printing Market, By Geographic Scope

- North America
  - o U.S.
  - o Canada
  - o Mexico
- Europe
  - o Germany
  - o UK
  - o France
  - o Rest of Europe
- Asia Pacific
  - o China
  - o Japan
  - o India
  - o Rest of Asia Pacific
- Rest of the World

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