

# U.S. 3D Printing Market Outlook 2020

<https://marketpublishers.com/r/U721A768B2DEN.html>

Date: December 2015

Pages: 102

Price: US\$ 1,500.00 (Single User License)

ID: U721A768B2DEN

## Abstracts

Globally, burgeoned investment in Research and Development (R&D) across industries like aerospace, automotive, healthcare, oil and gas etc. will fuel the additive manufacturing industry. Following the same trend, the US 3D printing industry is poised to experience astonishing growth in the future.

A shift from designing prototypes to producing end-user products can be seen in various U.S. industries. As a result, the 3D printing industry is anticipated to touch USD 17.2 billion mark by 2020. Increased government initiatives for small and medium enterprises would further help in increasing exports to international geographies.

While defining the industry by segment, it is seen that printers sector will grow at highest CAGR of 29% through 2015-2020. Continuous falling prices of 3D printers would increase the installation numbers in households and small offices. In contrast, the maintenance segment will show the slowest growth rate from 2015-2020. The service and maintenance segment is hoping to expand at a CAGR of 22% to reach USD 3.46 Billion over the next five years from 2015 to 2020. The reason for the slow growth can be attributed to decrease in 3D printer prices. It is expected that people would prefer buying new printers with advanced technology at a comparatively lower rate rather than getting them fixed for any technical issue.

An expanded demand for 3D printing from aerospace is expected, especially from civil aircrafts and space-crafts. U.S. aerospace industry rose at a CAGR of 3% from 2011 to 2015, under which space craft showed highest growth 7% y-o-y, followed by civil aircrafts at 6% annually. The scientists in space research agencies are continuously looking for methods to develop parts that can be developed on-site in the space for any emergency repair. Additionally, in automobile and aerospace industry there is huge demand for equipment that can develop heavy-duty parts and accessories from light-weight material and in an inexpensive way in no-time.

In additive manufacturing industry the consolidation is trending to acquire more number of patents and innovative technologies. However, many big players are facing legal issues while implementing new technology and services. For instance, government rules doesn't allow any of the business to develop the armaments or destructive elements/equipment like guns. There are other rules imposed by FDA, EPA and related, to safeguard the society interest. For instance, developing functional kidney, heart and liver through bio-printing is possible but the permission has to be granted by government agencies to transplant these organs. Similarly, there are various hurdles being faced by aerospace industry while implementing the newly developed products in the aircrafts as the safety and security of the civil society needs to be addressed first.

Currently, all the major players in the additive manufacturing are trying to tap sector like education to increase the awareness about the technology and its benefits. In order to follow this, various labs have been set-up by the companies for students, small businesses and civilians. Furthermore, the players are now focusing upon the mass customization that would attract more acceptance and interest of customers/clients.

## Contents

### **1. LIST OF FIGURES**

### **2. LIST OF TABLES**

### **3. EXECUTIVE SUMMARY**

### **4. RESEARCH METHODOLOGY**

### **5. 3D PRINTING – AN INTRODUCTION**

#### 5.1 Process

#### 5.2 Technology

##### 5.2.1 Stereolithography (SLA)

##### 5.2.2 Fused Deposition Modeling (FDM)

##### 5.2.3 Selective Laser Sintering (SLS)

##### 5.2.4 Selective Laser Melting (SLM)

##### 5.2.5 Electron Beam Melting (EBM)

##### 5.2.6 Laminated Object Manufacturing (LOM)

#### 5.3 Materials Used

### **6. GLOBAL 3D PRINTING**

#### 6.1 Introduction

#### 6.2 Patent landscape

### **7. US 3D PRINTING INDUSTRY AN OVERVIEW**

### **8. US 3D PRINTING MARKET SEGMENTATION**

#### 8.1 By Products

##### 8.1.1 Printer

#### 8.2 By Materials

#### 8.3 By Services

### **9. OPPORTUNITIES IN US 3D PRINTING MARKET**

- 9.1 Aerospace
- 9.2 Healthcare
- 9.3 Automotive
- 9.4 Oil & Gas
  - 9.4.1 Upstream Opportunities
  - 9.4.2 Downstream Value

## **10. PORTER'S FIVE FORCE MODEL ANALYSIS**

## **11. INDUSTRY GROWTH DRIVERS**

- 11.1 Increasing Research and development expenditure
- 11.2 Increasing Government Support
- 11.3 Increasing Demand From Manufacturing & Healthcare
- 11.4 Mass customization

## **12. RESTRAINTS**

- 12.1 High Cost
- 12.2 Unavailability of Skilled Labor
- 12.3 Lack of Export assistance
- 12.4 Access to capital

## **13. LEGAL CHALLENGES**

## **14. GOVERNMENT INITIATIVES FOR SMALL AND MEDIUM BUSINESSES**

- 14.1 Research Expenditure
- 14.2 America Makes
- 14.3 The National Institute of Standards and Technology's Hollings Manufacturing Extension Partnership (MEP)
- 14.4 RFP-EZ
- 14.5 Challenge.gov
- 14.6 SBA Loan Process
- 14.7 Government Venture Investing
- 14.8 The Jumpstart Our Business Startups Act of 2012 (JOBS Act)
- 14.9 Export Control Initiative
- 14.10 Export.gov
- 14.11 State Trade and Export Promotion (STEP) Grant Program

- 14.12 National Export Initiative/Next (NEI/NEXT)
- 14.13 Income-Based Repayment Plan
- 14.14 Rhode Island Plan
- 14.15 Venture for America (VFA)
- 14.16 Entrepreneurship Student Loan Deferment
  - 14.16.1 National Science Foundation (NSF) Innovation Corps (I-Corps) Program
  - 14.16.2 NSF Engineering Research Centers
- 14.17 Executive Action
- 14.18 The Workforce Innovation and Opportunity Act (WOIA)
- 14.19 Manufacturing Universities Act of 2014

## **15. REGULATING 3D PRINTING BY VARIOUS BODIES**

- 15.1 Food and Drugs industry
- 15.2 Aerospace Industry

## **16. COMPETITIVE LANDSCAPE**

- 16.1 Stratasys
  - 16.1.1 Company Overview
  - 16.1.2 Key Financials
  - 16.1.3 Recent News & Developments
- 16.2 Exone
  - 16.2.1 Company Overview
  - 16.2.2 Key Financials
  - 16.2.3 Recent News and Developments
- 16.3 3D Systems
  - 16.3.1 Company Overview
  - 16.3.2 Key Financials
  - 16.3.3 Recent News and Developments
- 16.4 Optomec
  - 16.4.1 Company Overview
  - 16.4.2 Key Financials
  - 16.4.3 Recent News & Developments
- 16.5 Disclaimer

## List Of Tables

### LIST OF TABLES

Table 9- 1: US 3D printing service providers

Table 17- 1: Stratasys Revenue by Product and Services

Table 17- 2: Stratasys Revenue by Region (USD Millions)

Table 17- 3: Stratasys - Key Financials

Table 17- 4: ExOne Revenue by product, materials & services (USD Millions)

Table 17- 5: The ExOne Company - Key Financials

Table 17- 6: 3D Systems – Revenue (USD Millions), 2012-2014

Table 17- 7: 3D Systems – Revenue by Geography (USD Millions), 2013-2014

Table 17- 8: 3d Systems - Key Financials

## List Of Figures

### LIST OF FIGURES

Figure 3- 1: US 3D Printing Market Size (USD Billion) & Y-o-Y Growth %, 2015-2020 5

Figure 6- 1: Top 3D Printer Manufacturers

Figure 6- 2: Fused Deposition Modeling (FDM) Working Model

Figure 6- 3: Selective Laser Sintering (SLS) Working Model

Figure 6- 4: Selective Laser Melting (SLM) Working Model

Figure 6- 5: Electron Beam Melting (EBM) Working Model

Figure 6- 6: Laminated Object Manufacturing (LOM) Working Model

Figure 7- 1: Global 3D Printing Market Size, 2015-2020 (USD Billions) & Y-o-Y Growth

Figure 7- 2: Global 3D Printers Shipments, 2014 (Percentage)

Figure 7-3: Percentage share of Additive Manufacturing in Other Industries, 2014

Figure 7-4: Percentage share of Additive Manufacturing in Industrial Products, 2014

Figure 7- 5: 3D Printing Application, 2014 (In Percentage)

Figure 7- 6: Factors affecting 3D Printers & Services Purchase, 2014

Figure 7- 7: Global 3D Patent Distribution, 2013 (By Percentage)

Figure 8- 1: US 3D Printing Market Size (Billion USD), 2014-2020

Figure 9- 1: Types of Printer Purchased (In Percentage), 2014

Figure 9- 2: Price Range of Household and Small Industrial 3D Printers (USD), 2014

Figure 9- 3: US 3D Printer Market Size (USD Billion) & Y-o-Y Growth %, 2015-2020

Figure 9- 4: US 3D Printer Material Market Size (USD Billion) & Y-o-Y Growth %, 2015-2020

Figure 9- 5: US 3D Printing Service & Maintenance (USD Billion) & Y-o-Y Growth %, 2015-2020

Figure 10- 1: Aerospace Industry Sale by Product Group (In USD Billion), 2011-2015

Figure 10- 2: % Share of Groups in Total Sales, 2014

Figure 10- 3: Current & Future Application of 3D Printing in Civil Aerospace, 2014

Figure 10- 4: Current & Future Application of 3D Printing in Space-craft Industry, 2014

Figure 10- 5: US Government Spending on Healthcare (USD trillion), 2013-2017

Figure 10- 6: US Healthcare Expenditure, By Segment (USD Billion), 2014

Figure 10- 7: Additive Manufacturing share in Automotive Industry (USD million), 2013

Figure 10- 8: Current & Future Application of 3D Printing in Automotive, 2014

Figure 11- 1: Porter`s Five Force Model Analysis, 2014

Figure 14- 1: Legal Requirements in Business Steps

Figure 17- 1: Stratasys – Revenue (USD Million), 2012-2014

Figure 17- 2: ExOne – Revenue (Millions USD), 2012-2014

Figure 17- 3: 3d system – Revenue (Millions USD), 2012-2014

## I would like to order

Product name: U.S. 3D Printing Market Outlook 2020

Product link: <https://marketpublishers.com/r/U721A768B2DEN.html>

Price: US\$ 1,500.00 (Single User License / Electronic Delivery)

If you want to order Corporate License or Hard Copy, please, contact our Customer Service:

[info@marketpublishers.com](mailto:info@marketpublishers.com)

## Payment

To pay by Credit Card (Visa, MasterCard, American Express, PayPal), please, click button on product page <https://marketpublishers.com/r/U721A768B2DEN.html>

To pay by Wire Transfer, please, fill in your contact details in the form below:

First name:  
Last name:  
Email:  
Company:  
Address:  
City:  
Zip code:  
Country:  
Tel:  
Fax:  
Your message:

**\*\*All fields are required**

Customer signature \_\_\_\_\_

Please, note that by ordering from marketpublishers.com you are agreeing to our Terms & Conditions at <https://marketpublishers.com/docs/terms.html>

To place an order via fax simply print this form, fill in the information below and fax the completed form to +44 20 7900 3970